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For Index to Advertisements see Page 174.

For Literary Contents see Page 186.

INDEX TO ADVERTISEMENTS.

(THOSE WITHOUT NUMBER OF PAGE DO NOT APPEAR IN THIS ISSUE.)

	PAGE.
Aird, J. ... Tubes	200
Austin, J. B. ... Mineralogist	173
Bandell, H. B. ... Agent for Foreign Houses, &c.	—
Bank of Africa, (Ltd.)	173
British Guiana Bank	173
Bennett, Sons, and Co. ... Fuse Manufacturers	200
Birkbeck Bank	196
Bowes-Scott and Western ... Mining Machinery	2.0
Bute Works Supply Company (Limited) ... Steel Rails, &c.	181
Business Cards	197
Campbell, Johnston, R. C. ... Mining Engineer	173
Calvert, Robert S. ... Mining Engineer	173
Cannock Chase Colliery Company ... Coal Exporters	173
Cassel Gold Extracting Co. (Ltd.) ... MacArthur-Forrest Process	197
Champion Rock Borer Co. ... Rock Borers	175
Clarkson-Stanfield Concentrator (Ltd.) ... Dry Concentration	177
Clayton and Shuttleworth ... Engineers	—
Companies and Legal Announcements	196
Cornforth and Co. ... Share Dealers	173
Cotton Powder Co. (Ltd.) ... Explosives	200
Davies, Henry ... Mining Engineer	173
Davis and Son ... Mining, &c., Instruments	177
Daw, A. and Z. ... Mining and Civil Engineers	173
Daw, A. and Z. ... Rock Drills	199
Delta Metal Co. Ltd.) ... Metal	176
Dixon and Co. ... Iron Roofs and Buildings	175
Electrical Co. (Ltd.) ... Dynamos and Motors	198
Elliman, Sons, and Co. ... Embrocation	176
Epps and Co. (Limited) ... Cocoa	193
Felten and Guilleaume ... Wire Ropes, &c.	—
For Sale	196
Francis and Jenkins ... Copper Works Ladles	—
Fraser and Chalmers (Ltd.)... Mining Machinery	174
Frictionless Engine Packing Company ... Engine Packing, &c.	—
Gates Ironworks Co. ... Rock and Ore Breaker	198
Gilkes and Co. ... Turbines	—
Green, G. ... Ore Dressing Machinery	—
Hardy Patent Pick Co. ... High Class Tools	—
Hathorn, Davey and Co. ... Pumping Engines	—
Halse, E. ... Mining Engineer	173
Holman Bros. ... Rock Drills and Compressors	177
Howes, S. ... Turbines	198
Humboldt Engineering Works Co. ... Mining Machinery	176
Humble, S., jun. ... Hand Power Fan	175
Huntington, Professor ... Instruction in Assaying	173
Ingersoll-Sergeant Drill Co. of America. Rock Drills and Compressors	174
Ireland, James ... *Colliery Ready Reckoner*	197
Jones, J. A. ... Mining Engineer	173
Kitto, B. ... Assay Office	173
Krupp Grusonwerk ... Ore Extraction Machinery	175
Lambert's Wharfage Company ...	188
Larmuth, T., and Co ... Mining Machinery	199
Lancashire Patent Belting Co. ... Mining Specialities	—
Lancaster and Tonge ... Steam Pistons	175
Lloyd and Lloyd ... Tubes	—
Maclean, J. Grant ... Share and Iron Broker	173
McNeill's Code ...	173
Marsden, H. R. ... Stone Breakers and Ore Crushers	200
Martin and Pethybridge ... Assay Laboratory	173
Merry and Co. ... Assayers	173
Merton and Co. ... Aluminium	176
Messrs. Parkyn and Co. ... Mine Owners and Managers	173
Miners' Safety Explosive Com. (Ltd.) ... Explosives	199
Nobel's Explosives Co. (Ltd.) ... Water Cartridges, &c.	—
Pacific Mining Agency and Trust Company... Commission Agency	196
Parkin ... Signal Bells	176
Pass and Son ... Buyers of Lead Ashes, &c.	186
Phosphor Bronze Co. (Ltd.) ... Bolts Metal, &c.	193
Piggott and Co. ... Welded and Rivetted Pipes	—
Publications	197
Robey and Co. ... Engines and Ore Crushers	—
Roburite Explosives Co. (Ltd.) ... Explosives	199
Ropeways Syndicate ... Aerial Wire Ropeways	—
Rose, James ... *New Guide to the Iron Trade*	197
Royal Mining Academy of Clausthal ... Course of Lectures	197
Sales by Auction	196
Sandycroft Foundry Company ... Mining Machinery	—
Sandycroft Foundry Company ... Electrical Machinery	—
Schram and Co. ... Rock Drills and Compressors	176
eward, William ... Share Dealer	173
Shipping	196
Smith, J. M. ... Mines Inspected	173
South African Trust and Finance Co. (Ltd.) ...Investments, &c.	—
Spencer, John ... Iron and Steel Tubes	199
Stanley, W. F. ... Mathematical Instruments	174
Stewart and Clydesdale ... Iron and Steel Tubes	—
Stewart and Co. (Ltd.) ... Engineers and Boiler Makers	194
Symons, Brenton ... Mining Engineer	173
Tacknote ... *Form of Licence to Explore*	197
Tangyes Limited ... Engines, &c.	—
The Royal Bar-Lock Type Writer ...	175
To Let	196
Tuck and Co. (Ltd.) ... Packing Manufacturers	—
United Asbestos Co. (Ltd.)... ... Asbestos	197
Unity Safety Fuse Co. ... Safety Fuse	—
Vivian's Boring Co. (Ltd.) ... Boring Machinery	173
Walker Brothers ...Air Compressing Engines	—
Wanted	196
Ward, Thos. W. ... Rails, &c.	175
Watson, P. and Co. ... Share Dealers	173
Weatherdon, J. H. ... "Monarch" Rock Drill	—
Wiggin and Co. (Ltd.) ... Nickel Refiners	186
Williams, Captain William ... Consulting Mining Engineer	173
Wood, Charles ... Portable Railways, &c.	—

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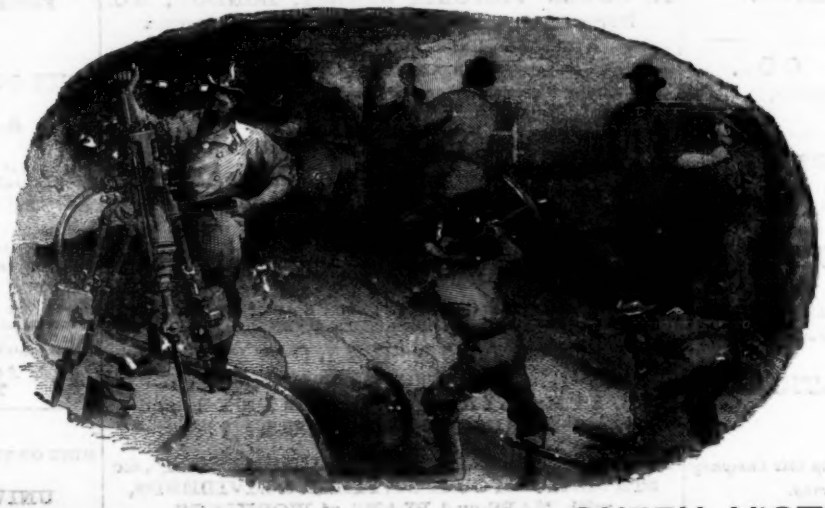

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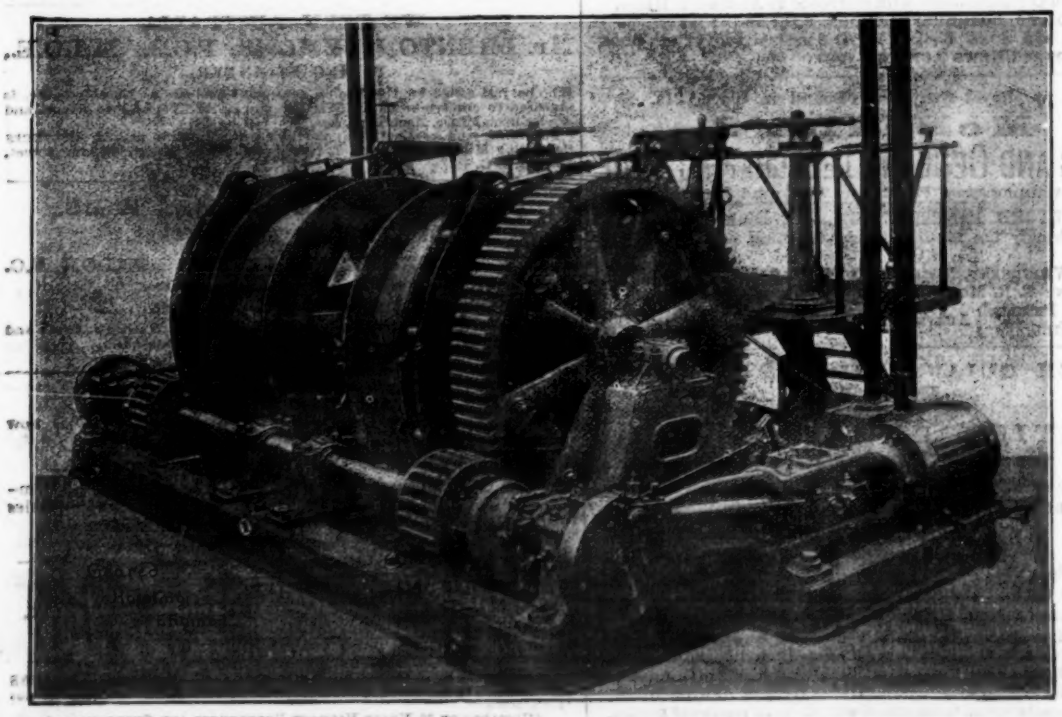

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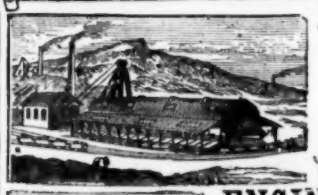

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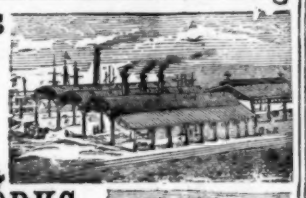

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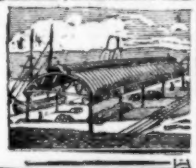

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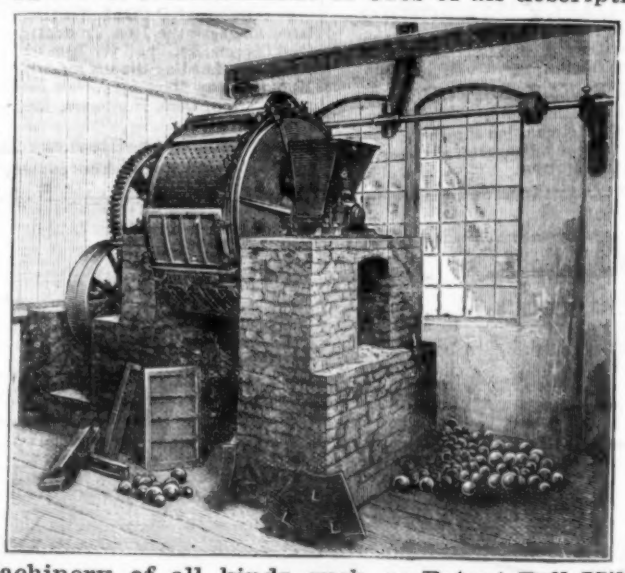

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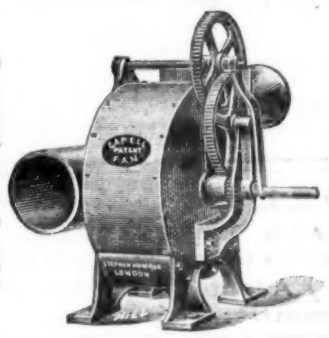

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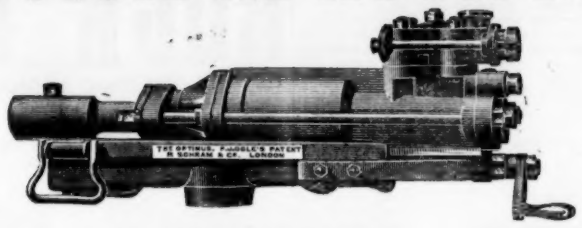

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Master of the South Wilts Hounds.

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From Major M. J. Balfe, South Park.
June 16th, 1892.

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Master of the Roscommon County Staghounds.

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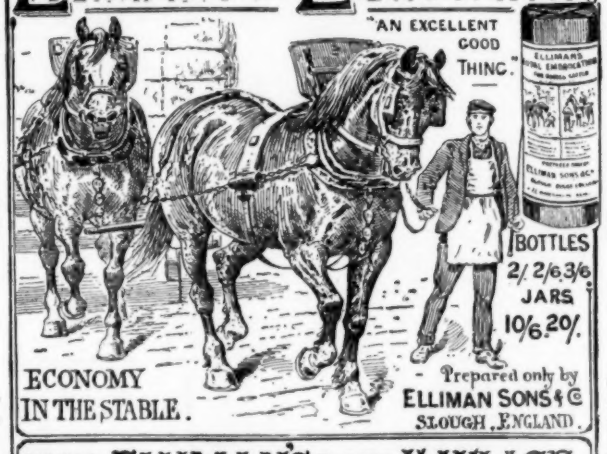

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HADDINGTON.
Master of the Berwickshire Hounds

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From R. Burdon Sanderson, Esq., Warren House, Belford
July 10th, 1892.

SIRS,—Elliman's Royal Embrocation is used in my stables, and I consider it very useful.
R. BURDON SANDERSON.
Master of Percy Foxhounds.

—o—

From Wm. J. Buckley, Esq., Penyfai, Llanelly.
July 16th, 1892.

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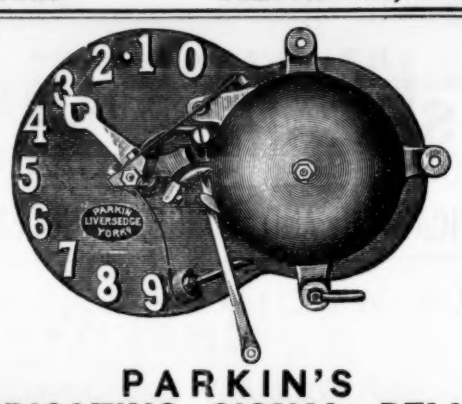

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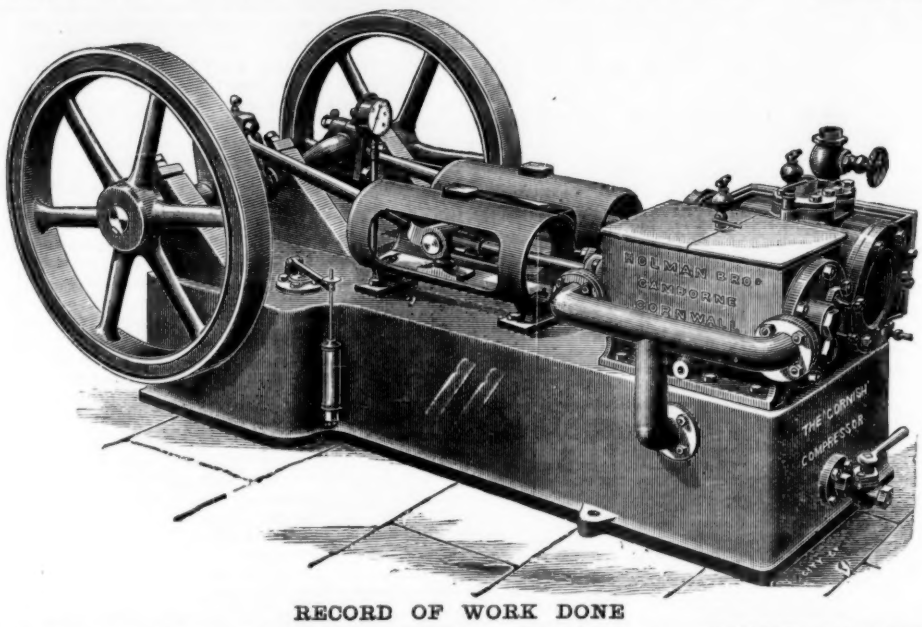

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At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

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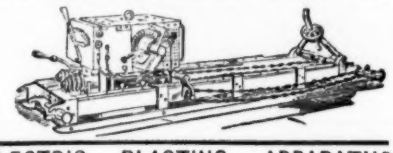

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The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Switches and Crossings, February 19 (*India Office*).—The Secretary of State for India in Council is prepared to receive tenders to supply switches and crossings. The conditions of contract may be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.

Boiler, February 20 (*Leeds*).—For the supply of a Lancashire boiler, 30 feet long by 8 feet diameter, for the Gasworks, Meadow Lane, for the Gas Committee. Plans and specification may be seen and further particulars obtained on application to Mr. Easton, Gas Stores Department, 21, Dewsbury Road, Leeds. Tenders will be received, addressed to the Chairman of the Gas Committee, Municipal Offices, Leeds.

Sinking Pit, February 20 (*Kirkford, Scotland.*)—For the further sinking of a pit being put down by the Fife Coal Company (Limited), near Kirkford, on the lands of Stevensonsheath. Specifications can be seen at the company's office, at Hill of Beath, Crossgates, or at the Head Office, Leven.

Well, February 26 (*East Cowes*).—For the completion of a well in brickwork and cast-iron cylinders, and for building an engine-house, for the East Cowes Urban District Council. Plans and specifications may be seen, and bills of quantities obtained, at the offices of the engineers, Messrs. Lemon and Bilzard, Castle Lane, Southampton.

Sinking Wells, March 2 (*Sleaford Lancs.*).—For works required in sinking well, constructing brick tower, supply and fixing cast iron reservoir, gas engine, and pumps, providing and laying about 3100 yards of 4 inch, 3 inch, and 2 inch cast iron pipes, together with service valves, &c., required in the construction of waterworks in the parish of Heckington, for the Sleaford Rural District Council. Plans and specifications may be seen, and quantities and forms of tender obtained at the office of Mr. Jesse Clare, C.E., surveyor to the Council, Sleaford.

Coal, March 4 (*Ipswich*).—For the supply of coal for one year from May 1, for the Great Eastern Railway Employees' Coal Club. All coal must be well screened, and of the best quality. Tenders to be sealed and sent to Mr. J. W. Chandler, 157, Wherstead Road.

Railway Construction (*Scotland*).—For the construction of a railway in Fife from the end of the Westfield branch of the North British Railway to Kinninmonth Colliery. For specification and schedule apply to Mr. John Wilson, secretary, Central Fife Coal Company (Limited), 112, Bath Street, Glasgow.

Sinking Shaft (*Denny, Scotland*).—For sinking shaft at Castlerankine Colliery, Denny; from 27 to 60 fathoms. Apply to Mr. Robert Thomas Moore, C.E., 156, St. Vincent Street, Glasgow.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

1907 Joseph Bradbury, Brook Ironworks, Charles Street, Manchester.—Improvements in and applicable to furnaces for steam boilers.—January 28.

1946 Henry Harris Lake, 45, Southampton Buildings, Chancery Lane, London.—Improvements in water-tube boilers.—January 28.

1952 Charles Watteyne, 65, Chancery Lane, London.—Improvements in motive power engines.—January 28.

1994 William Glass Wrench, 62, St. Vincent Street, Glasgow.—Improvements in apparatus for circulating water in steam boilers.—January 29.

2015 Alfred William Bennis and Edward Bennis, 6, Lord Street, Liverpool.—Improvements in mechanical stoking furnaces.—January 29.

2032 Albert François, 60, Queen Victoria Street, London.—Safety lock with pneumatic release for miners' lamps.—January 29.

2048 William Michael, 433, Strand, London.—Improvements in or relating to compounds suitable as lubricants in drilling iron and analogous operations.—January 29.

2083 Joseph Baxeres Torres, 13, Golden Square, London.—Improvements in the manufacture of alloys.—January 30.

2108 Frederick Willoughby, Bank Buildings, George Street, Sheffield.—Improvements in and relating to the sockets of miners' picks.—January 30.

2177 Wilhelm Hok and Consitt Elliott, 13, Ashmore Street, Sunderland.—Improvements in steam generators.—January 31.

2205 Howard Theophilus Wright, 47, Lincoln's Inn Fields, London.—Improvements in or connected with apparatus for heatening and softening and purifying water for feeding steam boilers, or for other purposes.—January 31

2240 John Overton, 2, Percy Street, Coventry.—Hydraulic motor.—February 1.

2248 John Henry Rothwell, 17, St. Anne's Square, Manchester.—Improvements in miners' safety lamps.—February 1.

2272 Archibald Duncan Watson.—The combined scale and pencil.—February 1.

2280 William Oliver Smith and George Keith Buller Elphinstone.—Improvements in galvanometers.—February 1.

2288 Desmond Gerald Fitzgerald.—Improvements in voltaic batteries.—February 1.

2293 Carl Thomas Alfred Hanssen.—Improvements in air compressors and blowing and exhausting machines.—February 1.

2853 Thomas Forknall.—Improvements in mechanical stokers.—February 2.

SPECIFICATIONS PUBLISHED.

1203, Trivick and others, reversing regenerative furnaces, 1894; 2813, Schlick, steam engines, 1894; 3647, Houghtaling, steam engine indicators, 1894; 4744, Lake (Jousard), furnaces, 1894; 5804, Seymour, steam boilers, 1894; 6612, Woof, drilling machine attachments, 1894; 9049, Bonit (Lausmann), valves for steam engines, 1894; 16618, Della Torre, motors, 1894.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each including postage.

ANSWERS TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post. All questions and replies should be accompanied by the name and address of the writer.

REPLIES.

CAMBRIDGE.—We do not consider any of them a particularly good speculative purchase now.

CARLISLE.—We do not care for Nos. 2 and 3. The others appear to be worth holding.

R. R.—It is most unwise for anyone to hold Cornish tin shares if the dividends received therefrom contributed to that person's chief support. The mine you mention is a good one, but it would be wise, probably, to sell the shares and invest in something safe—not a mine.

J. J. C.—1, Will fluctuate; 2, 3, 4, 5, 6, 7, 8, 9, good to hold for the present; 10 and 11, sell; 12, 13, 14, 16, 17, 18, 19, 20, hold for the present; 15, sell.

T. S.—Nos. 2 and 4 appear the best or speculation. We do not care to recommend the others.

J. J.—They are showing an improving tendency. The best thing is to hold until you can take a profit.

T. R.—(1.) No.—(2.) A fair security.

J. G. H.—Sell whenever you can take a profit.

S. R. T.—Nos. 3 and 4 are both fairly good to hold. No such companies as the others are known on the market.

C. M. T.—Hold both. Do not at present buy more.

YORKS.—(1.) Very little.—(2.) We do not advise a purchase.

PERPLEXED.—Hold them for the present. Take a profit when you can.

THE IRON MOUNTAIN MINE, SHASTA COUNTY.—There is again a prospect that the old Iron Mountain Mine, of Shasta County, will be operated. Messrs. Hill and Thompson are now in this city, says the *San Francisco News Letter*, representing an English syndicate which has in view the introduction of a new and scientific system of ore reduction on this property.

THE CYANIDE PROCESS.

ITS PRACTICAL APPLICATION AND ECONOMICAL RESULTS.

By A. SCHEIDEL, Ph.D., E.M.

I.—History.

(*Continued from page* 156.)

THE application of a cyanide of potassium solution for the extraction of gold and silver direct from their ores, which application had been neglected since Rae, was taken up again by Jerome W. Simpson, of Newark, N.J., who obtained United States patent No. 323,222, dated July 28, 1885, for a process of extracting gold, silver, and copper from their ores. Simpson reduced his ore to a powder, and agitated it with a solution of certain salts, which combine chemically with the metal in the ore, and form therewith a soluble salt. The salt solution was composed of 4 lb. of cyanide potassium, 1 ounce of carbonate of ammonia, ½ ounce of chloride of sodium, and 16 quarts of water. This solution is described as particularly adapted to ores containg gold, silver, and copper in the form of sulphurets. In the absence of silver no chloride of sodium is used; for ores rich in silver a proportionately larger quantity of chloride of sodium is employed. The metals dissolved in the salt solution were precipitated by means of zinc, suspended therein in torm of pieces or plates Simpson was aware that cyanide of potassium, in connection with an electric current, had been used for dissolving metal, and also that zinc had been employed as a precipitant. What he claims as new is: (1) The process of separating gold and silver from their ores, which consists in subjecting the ore to the action of the solution of cyanide of potassium and carbonate of ammonia, and subsequently precipitating the dissolved metal by means of zinc. (2) The process of separating metals from their ores, to wit, "subjecting the ore to the action of a solution of cyanide of potassium, carbonate of ammonia, and chloride of sodium, and subsequently precipitating the dissolved metals."

My own experiments have proved that the addition of sodium chloride is of no benefit for the extraction of silver. The addition of ammonium carbonate is not beneficial to the extraction of either gold or silver, except under certain conditions, when it may be substituted advantageously by an alkali or an alkaline earth; in the presence of base metals it is of disadvantage. Simpson's patent description appears to indicate that he had not discovered the most important property of dilute cyanide solutions—namely, that of dissolving, without the addition of other chemicals, the noble (in preference to the base) metals. His patent claim consists eminently in adding to the cyanide solution the chemicals mentioned above. His process, like that of Rae, is an agitation process. The zinc for precipitating the bullion he used in the form of plates or pieces. There is no record in the technical literature in reference to the application of Simpson's process before the issue of the MacArthur and Forrest patents in 1889. After Rae and Simpson, others have made experiments with cyanide solutions, for the purpose of gold and silver extraction from ores. F. M. Endlich and N. H. Mühlenberger are reported to have filed a *caveat* in 1885, without, however, securing a patent, the former having apparently become doubtful as to the applicability of cyanide as an economical process. ("E. and M.J.", 1891, p. 86.) Louis Janin, jun., made interesting experiments in the same direction in Park City, Utah, of which he published the results in 1888. ("E. and M. J.", 1888, p. 548.) These experiments refer chiefly to silver extraction, but he mentions as well the results on gold ores; his results appear to have been encouraging, and led to his filing a *caveat* on May 1, 1886, but this was not pushed on to the taking out of a patent.

In the southern hemisphere, W. A. Dixon has made experiments with cyanide on Australian ores as early as 1887. He recorded his results, which are at least of historical interest, in a paper read before the Royal Society of New South Wales. Dixon describes therein the experiments made by him at the instigation of the Government Inspector of Mines, who suggested that the extraction of gold from complex minerals was a subject worthy of investigation. Dixon tried on such ores amalgamation and a number of solvents. He found "the auro-cyanides of the alkaline metals of sufficient stability to render their use possible for the extraction of the gold." He mentions Bagration's and Elsner's publications, and alludes to Rae's patent, of which however, he possessed no particulars. Dixon feared that "the high price of cyanide, its instability when exposed to the air, and its extremely poisonous qualities," would prove such obstacles as to preclude its use for metallurgical purposes. He found the reaction between gold and cyanide slow if "the gold was at all dense;" in presence of alkaline oxidising agents however, he found the dissolving process sufficiently rapid. Dixon experimented also with the ferrocyanide of potassium. His results generally, did not, as far as known, lead to the metallurgical application of cyanide as a gold and silver solvent.

I have thus described the history of cyanide of potassium as a gold-dissolving agent from the early laboratory experiments up to its metallurgical application for ore extraction. This latter, however, did not gain any practical importance until John S. MacArthur and W. Forrest, of Glasgow, Scotland, took out their patents for the use of cyanide as a gold and silver solvent from ores, and gave thereby the cyanide process a start all over the world. Their patents mark an epoch in gold metallurgy. The results of the application of cyanide, as suggested by them, have been very satisfactory; the $14,000,000 of bullion produced by it during the five short years of its working represents what by the ordinary methods would have been irrecoverably lost; hence its value and importance from the standpoint of metallurgy and political economy. The experiments of MacArthur and Forrest with gold dissolving reagents occupied some years before their English cyanide patents were applied for. (J. S. MacArthur, "J. S. Chem. I.", March 31, 1890, No. 3, Vol. 9.) They drew out a list of possible solvents having a stronger affinity for gold than for sulphides, which included the cyanides, and which they found to solve the problem. Their experiments, conducted first on a small scale, and with ores of many kinds and of different sources, were so satisfactory that they gradually worked on a larger scale, and the results formed the basis for the introduction of the cyanide process into most gold-producing fields. Their English patent was applied for October 19, 1887. Since then they applied for, and obtained, patents in many gold-producing countries. Their United States patents are dated as follows:—403,202, May 14, 1889; 418,137, December 24, 1889; 418,138, December 24, 1889. Their invention is described "as having principally for its object the obtaining of gold from ores; but it is also applicable for obtaining silver from ores containing it, whether or without gold, and it comprises an improved process, which, while applicable to auriferous and argentiferous ores generally, is advantageously and economically effective with refractory ores, or ores from which gold and silver have not been satisfactorily or profitably obtainable by the amalgamating or other processes hitherto employed; such as ores containing sulphides, arsenides, tellurides, and compounds of base metals generally, and ores from which the gold has not been easily or completely separable on account of its existing in the ores in a state of extremely fine division." The patentees describe their invention (I am following United States patent 403,202) as consisting in subjecting the ores to the action of a solution containing a small quantity of cyanide, without any other chemically active agent. In dealing with ores containing per ton 20 ounces or less of gold or silver, or gold and silver, they find it most advantageous to use a quantity of cyanide, the cyanogen of which is equal in weight to from one to four parts for every thousand parts of the ore dissolved in a quantity of water of about half the weight of the ore; they generally use a solution containing two parts of cyanogen for every thousand parts of the ore. In the case of richer ores, while increasing the quantity of cyanide to suit the greater quantity of gold or silver, they also increase the quantity of water so as to keep the solution dilute; in other words, the cyanide solution should contain from two to eight parts, by weight, of cyanogen to one thousand parts of water, and the quantity of the solution used should be determined by the richness of the ore. The patentees state: "By treating the ores with the dilute and simple solution of a cyanide, the gold or silver is, or the gold and silver are, obtained in solution, while any base metals in the ores are left undissolved, except to a practically inappreciable extent; whereas, when the cyanide is used in combination with an electric current, or in conjunction with another chemically active agent, such as carbonate of ammonia, or chloride of sodium, or phosphoric acid, or when the solution contains too much cyanide, not only is there a greater expenditure of chemicals in the first instance, but the base metals are dissolved to a large extent along with the gold or silver, and their subsequent separation involves extra expense, which is saved by their process." Later on MacArthur and Forrest obtained patent scovering the use of zinc in a fine state of division for the purpose of precipitating gold and silver from cyanide, chloride, bromide, thiosulphide, sulphate or other similar solution; they further protected the use of an alkali or alkaline earth for neutralising ores preparatory to subjecting the same to the action of cyanogen or of a cyanide. The MacArthur-Forrest patent claims consist, therefore, in three points: (1) The application of diluted solutions of cyanide (not exceeding eight parts of cyanogen to one thousand parts of water); (2) the use of zinc in a fine state of division; (3) the preparatory treatment of the ore, which has become partially oxidised by exposure to the weather, with an alkali or alkaline earth, for the purpose of neutralising the salts of iron or other objectionable ingredients formed by partial oxidation.

It is not the purpose of this paper, which is intended to describe the historical development of the cyanide process and its present forms of application, to enter into a judicial discussion of patent claims and patent rights. It is the duty of the historian to date the cyanide process as a commercial success from 1890, when it was introduced as "the MacArthur-Forrest process" on the Witwatersrand gold fields, in the South African Republic. Its success as a metallurgical experiment may be dated from the tests made on a large scale with ore from the New Zealand Crown Mine in June and July, 1888. The practicability of the cyanide process once established, others endeavoured to introduce improvements in its application, which they protected by letters patent. A patent which once promised to become of practical importance is that of B. C. Molloy, of Johannesburg, whose "improvement" consists in the abolition of zinc as a precipitant of gold, and in the revivification of the cyanide of potassium in the solution. In this process the ore is treated with cyanide of potassium as usual; the resulting liquors are passed through a "patent Molloy separator," which consists of an amalgamator, the mercury of which is constantly being charged electrolytically with potassium. The potassium on coming into contact with the solution, decomposes it with the evolution of hydrogen, and the formation of the oxide of the alkaline metal. The nascent hydrogen decomposes the solution of the cyanide of gold, and sets the gold free, which is precipitated upon and collected by the mercury; the metal of the alkaline oxide reacts upon the cyanogen compound, and so reproduces the cyanide of potassium. The original solution thus regenerated, is then ready for use again.

Among other cyanide patent specifications may be mentioned the following:—John C. Montgomerie, of Scotland, obtained English patent No. 12,641, 1892, "for improvements in the extraction of gold and silver from ores and in apparatus applicable for use in the treatment of such by means of solvents." His process is the well-known agitation process of finely divided ore with cyanide solution and the addition of an alkaline oxide "for the purpose of economising the solvent and expediting its action." The patent specification does not contain any claims which might be termed either an invention or an improvement, either chemically or mechanically. One of the latest additions to the cyanide patent literature is United States patent 515,148, dated February 20, 1894, of Alexis Janin and Charles W. Merrill, for a process of leaching ores with solutions of alkaline cyanides. They claim as new "the art of leaching ores with solution of alkaline cyanides, which consists in first leaching the ore with such solutions, then adding to the solution an agent which will precipitate the silver present as a sulphide, and then precipitating the gold in the solution with metallic zinc." The practical advantages of this complication will have to be proved.

A patent description of interest, although not a "cyanide process" strictly speaking, is that of E. D. Kendall, of Brooklyn, N.Y., dated September 13, 1892, who claims the use of potassium ferrocyanide combined with cyanide of potassium, for extracting gold and silver from ores, &c., as his invention.

A further addition to the patent literature is the specification of MacArthur and Ellis, who propose to increase the efficiency and economy of the process in cases in which from the nature of the ores treated or other circumstances, soluble sulphides are formed, which retard and objectionally affect the action of the cyanide on the precious metals by adding to the ore or the cyanide solution suitable salts or compounds of metals which will form with the sulphur of the soluble sulphides an insoluble or inert sulphide. For this purpose preference is being given to the metallic salts or compounds in the following order:—Salts or compounds of lead—such as plumbates, carbonates, acetate or sulphate of lead—sulphate or chloride of manganese, zincates, oxides, or chloride of mercury, ferric hydrate or oxide. The proportion to be used is easily to be ascertained by trials of a few samples in each case.

C. Moldenhauer proposes to render the cyanide process more expeditious and considerably cheaper by, firstly, adding to the cyanide solution an artificial oxidising agent, by preference ferricyanide of potassium in alkaline solution; and, secondly, in precipitating the extracted precious metal out of its cyanide solution by means of aluminium, or alloys, or amalgam thereof.

C. M. Pielsticker reverts to the application of the electric current, in conjunction with the cyanide solution. He proposes to continuously circulate the solvent, to continuously precipitate the dissolved precious metals by electrolysis, and continuously regenerate thereby the reagent.

The latest patent in connection with cyanide treatment of ores is that of Dr. W. D. Johnston, "for abstracting gold and silver from their cyanide solutions by means of pulverised carbon."

Such is the history of the cyanide process, rapidly sketched by tracing its development through the phases of its evolution and the intricacies of its patent literature. The modern cyanide process consists in the treatment of ores by means of dilute cyanide of potassium solutions, as a rule without the addition of other chemical substances, and in the subsequent precipitation of the gold and silver from the solution by means of zinc in form of shavings. It is commonly known as the MacArthur-Forrest process. I now propose to enter into a description of the process itself. I embody in it the information given me by Mr. John S. MacArthur, of Glasgow, Scotland.

II.—Scope of Process

The process can be advantageously applied to many gold ores and many silver ores, and is often suitable for ores which are generally considered as rebellious or refractory. The word "ore" is here meant to include ores, tailings, concentrates, and all similar products from ore. The term "refractory" is used to signify any ore which cannot be satisfactorily amalgamated. The refractory character of such ores can be caused by the presence of base metals in combination with sulphur or arsenic, or otherwise by their physical structure, which prevents the gold from coming in contact with the mercury during the amalgamation process. To the latter class belong the ores in which the gold is "coated" with substances which prevent metallic contact (rusty gold.) (An excellent instance of such coated ore is found in the Mount Morgan Mine, in Queensland, where the finely divided gold is coated with a film of what has been termed hydrous peroxide of iron, which makes the gold absolutely refractory to amalgamation.) To the same class of refractory ores belong those in which the gold is so finely divided that the film of air surrounding the auriferous particles prevents amalgamation even under the most favourable conditions. The base metals which most frequently accompany refractory ores are iron, zinc, lead, copper, and antimony—usually as sulphides sometimes as arsenides. When ores containing gold, silver, copper, zinc, iron, &c., are treated with solutions of cyanide of potassium, these metals are dissolved more or less, forming soluble cyanides. The solvent action on the base metals can be reduced to a minimum by reducing the strength of the solutions, the readily soluble gold and silver being easily dissolved out with only traces of copper, zinc, &c. The action of these weak cyanide solutions on iron, lead, arsenic, &c., is practically *nil*, and the solvent action on copper or zinc depends much upon the state of chemical combination in which they exist.

The cyanide process is adapted to treat most of such refractory ores as are described above. The principal exceptions are the ores which contain hydrated copper oxides and copper carbonates, and those which contain an appreciable quantity of antimony. "When copper compounds exist in a state physically hard, the cyanide solution does not readily act on them; but when the copper compounds are soft, porous, and spongy, the action of the cyanide is so decided as to interfere materially with its action on gold" (MacArthur). In reference to copper sulphide I found it no impediment to the process; carbonate of copper, however, was so readily attacked by cyanide that its presence proved absolutely prohibitive to the extraction of silver and interfered seriously with the extraction of gold. This most refractory ore that I am speaking of came from old workings in the Sylvia Mine, Tararu, New Zealand, where part of the ledge containing a large percentage of copper pyrites had been exposed for many years to the influence of moisture and the atmosphere; the resulting carbonate was hard, but notwithstanding this its reaction on cyanide solutions was very marked: 1½ ounce of such copper ore, finely divided and shaken for less than 15 minutes with a 2·73 per cent. cyanide of potassium solution, reduced the strength of the solution to 0·05 per cent. of cyanide. The treatment of the ore in question proved that the affinity of cyanide to gold is at least equal to that of cyanide to copper, and very much greater than to silver, as, notwithstanding the rapid consumption of cyanide by the copper compound, upwards of 70 per cent. of the gold assay value was extracted by cyanide solution of the usual strength, whereas at the same time absolutely no silver had gone into solution. A preliminary treatment of such ore by sulphuric acid had a beneficial effect on the consumption of cyanide, and thereby on the extraction of silver.

"In the case of antimonial ores there is little or no interaction between the antimony and the cyanide, consequently, the latter is not taken up; but as gold seems to be very firmly held by antimony, and as the compound is very impervious, the cyanide is unable to penetrate the mass, and to dissolve and separate the precious from the base metals. In the case of both copper and antimony the cyanide solution will act, but in the case of copper, if there is much present and acted upon, the consumption of cyanide is so great that the operation is not profitable, and in the case of the antimonial ores, though the cyanide will act with fine grinding and long contact, the expense involved often overbalances the value of the gold contents." (MacArthur.) The physical state in which obnoxious compounds are found, is of the greatest importance. Hard-surfaced crystals are, even if finely divided, naturally less acted upon by cyanide than soft, spongy masses of the same size. For technical purposes, cyanide treatment of any ore will be called unsuccessful if the large consumption of cyanide precludes a commercial success, although finally a satisfactory extraction in percentage may be achieved.

(*To be continued.*)

WEST KOOTENAY GOLD MINES, BRITISH COLUMBIA.

Report by Mr. JOHN L. M. FRASER, C.M.E.

These mines are situate in the Trail Creek division of West Kootenay, British Columbia, 14 miles from the Transcontinental Railroad, which will be extended this summer right into the mining camp, so that freight to the smelters is easy and inexpensive. The property consists of three claims 1500 feet by 600 feet each, through which runs several well defined reefs, embedded in diorite formation. The main reef has been opened upon by pits and shafts showing it to be from 5 to 7 feet wide of rich gold ore running nearly east and west and dipping north. One thousand tons of this ore has been shipped to the smelters, showing an average of $40 per ton, which after deducting freight, mining, and smelting of $18 per ton, leaves $22 per ton profits. There is in sight 35,000 tons, and further developments will considerably increase that quantity. The ore is so very rich, that it only requires to be picked and sent direct to the smelter. From the present indications on this one reef alone, you may reasonably expect to ship 30,000 tons of ore per year at a profit of $660,000. I would strongly advise you to develop the other reefs on your property, as they are in the same formation as the rich Main Reef, and there is no geological reason why they should not be equally as rich, for which purpose you should form a company to provide the necessary working capital, and I am confident it will be very profitable to the shareholders.

LANGLAAGTE STAR GOLD MINING COMPANY (LIMITED).—A London agency and transfer office has been opened at 8, Prince's-street, E.C., and Messrs. John H. Butt and Simon Marcus have been appointed London agents.

MINING IN SPAIN (ASTURIAS).

[FROM OUR OWN CORRESPONDENT.]

TRIAS.

THE Triassic formation in this Province is not very extensive, but where it exists it is so well developed that it cannot be mistaken by anyone who has studied it in England, Germany, and Russia. The series, however, is not complete. The Bunter sandstein exists, and so does the Keuper; this latter having a maximum thickness of 1460 feet.

The beds are horizontal in some places, with a gradually augmenting dip to the north, and occasionally they can be followed to the coast, where they pass under the sea. To the east they are thrown up and tilted by the diorite upheavals referred to in the former notes on the Permian, and are further influenced by these.

The western portion about Avilés rests unconformably on the Devonian, and is comprised of bedded red sandstones and marls, and a thick bed of quartzose gravel.

The Arnao tunnel, 700 metres long, has been driven through this. It has the strange feature of being overlaid by the Lias silicious conglomerate, which is here very thick. This is evidently the lower series of the Trias, but here both the Muschelkalk and Keuper are absent.

South-east from this there is a continuity of it, but the quartzose gravel is a compact conglomerate, very refractory. Some of this is utilised for blocks for the construction of blast-furnace crucibles, and these stand the wear and tear well.

To the south of Gijon, the Trias comprises the Keuper marls, with thin interlying scales of foliated gypsum. These marls are of all colours, the red predominating. Two railways have opened out fine sections in this, that permit a continuous examination. There has been no rock-salt met with in either section. A portion of the Keuper is overlaid by a bed of dark coloured crystalline gypsum, which is worked in a number of places to supply the locality with plaster, as well as for shipment to Galicia. This bed varies from three to five metres in thickness, and is again overlaid by highly fossiliferous Lias limestone.

To the east, the influence of the Plutonic masses has changed the Keuper into an arkose, having nodules of decomposed porphyry. This can be seen very distinctly in the district about the village of Torazo. In this eastern portion there is also a grey limestone conglomerate, heavily pitched, which seems to separate the Carboniferous from it, and above this in the Keuper, a red conglomerate.

Between the two there is a concordant vein of red fibrous hematite 3 metres thick, that has not been worked to any great extent, but which promises an abundant output for a long time. And it is within three miles of a small bay, that can be transformed into a shipping port without any heavy outlay of capital.

The southern part of the eastern portion rests conformably on the Permian in some instances, and in others on the Carboniferous. The usual accompaniments of the Trias exist, too, in this eastern portion. The brine springs at Moral and Sariego flow continuously, although they are not abundant. The brine is strongly charged with sodium chloride, and magnesium chloride is absent.

When salt was a Government monopoly in the country, these springs were enclosed by a strong iron railing, and carbineers were stationed in their vicinity, to prevent the country people using them as the sources of their supplies of salt.

All that has been changed. To-day anyone can take the quantity of brine they please. There is no care taken of the springs; their bottoms are covered with a bed of ooze, through which the brine forces its way, running off in a clear stream. Doubtless if they were deepened, there would be a good flow of brine. The gauged outrun in the Moral Spring at present is 112 gallons per hour. These springs probably derive their briny components from masses of rock salt in the vicinity, and boring might establish the fact that there is here a basis for an undeveloped industry. The Lieres coal field is only two miles distant, and pan fuel could be placed on the spot at a cost of 2s. 6d. per ton. All the salt used in the Province for ordinary uses is brought from Cadiz and Majorca, and costs delivered, considerably over £1 per ton. There is a large yearly consumption of chemicals in the two glass factories in the Province; these have to depend on foreign imports for their uses, and have to pay heavy import duty on them, as there are no chemical works to supply their requirements. If borings show an abundant supply of good brine, and the proximity of coal be considered, it can readily be seen that all that can be changed, and there is a lucrative business ahead of any pioneer speculating capitalist. Like in other European countries, the Trias here is poor in metalliferous bodies.

One deposit of copper near Ferroñes represents all that has to the present been discovered of that metal. This consisted of a *bonanza* of good azurite and malachite, loosely held together in ochre and sand. This was worked out many years ago. The sandstone walls of the working still show thin stringers of azurite, which, if followed, may lead to other bonanzas.

There is a thick bed of ochre having a good body, and as it is only covered by *humus*, in some cases can be readily worked, but it has the disadvantage of requiring lixiviation to remove the grit with which it is intermixed. The beds are similar to those of Auxerre in Burgundy, but the prepared ochre from these is superior to that of France. The ironstone vein mentioned above is unique.

In the series there are several lodes of baryta, some of them marked with copper carbonate, others are free from accompanying minerals.

The absence of the Muschelkalk series in the portion under review causes a paucity in the fauna; this is reduced to the one species *estheria minuta*.

Up to the present there are no sections open to show whether there are any genera of reptiles in the yellow sandstones, whereof there is one good bed. If quarries be opened in it important discoveries may result.

GOLD MINING BY CO OPERATION.—When the Alaska Mine, of Sierra County, was started up some time ago on the co-operative plan, the success of the experiment was questioned in many quarters. Everything worked out all right, however. The Orleans Mining Company, of Ne County, is now following the example, and others will fall into line as the system becomes more generally understood. This is the proper plan for a Miners' Union, where they can dictate unto themselves, and let the capitalist run his concerns in his own way. The plan has worked well in Australia from the earliest days of gold mining, when the Ballarat diggings were in their glory, and it has also been tried here to good advantage, as the pioneer miners will admit who worked their claims on a partnership basis, with about enough money among the crowd to buy an outfit, and sometimes a very poor one at that. Men might a great deal better ply the pick and shovel to possible advantage in this way to lounge around the whiskey shops in a camp, waiting for some mining man to drop in with a scheme. Many opportunities offer to open up mines in this way, and it will be a good day for the State when the system is more generally adopted.—*San Francisco News Letter.*

PARIS LETTER.

(FROM OUR OWN CORRESPONDENT.)

South African shares.—The Transvaal Coal Trust.—A new gold mining company.—Phosphates in Tunis.—Colliery disaster.

THE fall in South African gold shares has been marked in those values that have been the subject of wild speculation lately, and has practically left untouched those which have been bought *au comptant* for purposes of investment. In fact, the set-back in this branch of mining enterprise is purely the inevitable reaction from excessive speculation, and already buying is being quietly pursued by persons who are anxious to increase their holdings in favourite shares. Such companies as the Langlaagte Royal, the Geldenhuis Estate, and others, which were largely speculated in, on the rumour of their formal introduction on the Paris market, have suffered most severely. On the other hand, there has been considerable buying of City and Suburban, because of a report that the shares were to be divided into four, and officially quoted here. There has, likewise, been a recovery in Henry Nourse, and a firm tone is maintained in Heriots. As has been said, the decline is purely due to speculative influences, and confidence remains unshaken amongst investors in the future of the Witwatersrand gold fields. The holdings of French capitalists in Transvaal gold mines are now supposed to amount to five millions sterling, and by far the greater part of this is held by the small frugal *rentiers* who make up the backbone of our market No doubt some of the South African values are much too high at present prices, considering the probable life of the mines, to repay holding, but these are very tempting to speculators at intervals, on the strength of more or less accurate reports of fusion with more enduring concerns.

As showing the sanguine temper in which the speculative side of the Bourse regards South African gold mining, it may be mentioned that a strong "bulling" movement has arisen in the shares of the Transvaal Coal Trust (Limited) because of the theory that gold existed in the coal. There is nothing especially attractive in the position of this concern as a coal mining company—that is to say, nothing to justify a wild "boom" in the shares. But Mr. Lippert, the concessionaire from the Transvaal Government of the dynamite monopoly, who is responsible for a good deal of the recently-awakened interest of the French capitalists in South African gold mining, has issued a statement that the cinders of coal from the Springs and Brakpan Collieries were found to contain as much as 10 dwts. per ton. This conclusion was declared to be warranted by experiments carried out at the famous Mineralogical Institute at Freiburg. On the lowest estimate the content of gold in the ore would, it was declared, give a return upon the capital of the company of 10 per cent., with a possibility of 30 per cent, to say nothing about any return from coal mining. It is gravely stated that experiments are proceeding at Freiburg with some 40 or 50 specimens of coal, with a view of ascertaining whether it will be necessary to crush the coal itself, or whether it can be first used to fire boilers that drive the gold crushing plants on the Rand, and the cinders then crushed themselves for the sake of the gold they contain. The idea of working a coal mine in order to get gold from it strikes one as a little droll, but the grave statement of these expectations has had the effect of inducing quite a rush in Coal Trusts on the Bourse.

The difficulty that investors have to put up with in not being able to get accurate information about the properties in which they are interested is likely to be overcome by the formation of a company this week under the title of the Compagnie Française de Mines d'Or et d'Exploration. The capital of the new concern is 10,000,000 frs., and its object is a sufficiently comprehensive one, embracing as it does the acquirement and working of gold mines in South Africa, the buying and selling of shares, and the carrying out of financial transactions relating to South African mines. It is expected that this new company will do a great deal towards putting the Paris Share Market into something like order.

The attempts that have been made to raise capital for the working of the mineral deposits of Tunis and Algeria have met with scarcely any success, and this disinclination of investors to participate in the development of resources in their own country is one of the most striking features of the financial situation. It can hardly be urged that the undertakings in the African colonies are in the nature of a speculation. The minerals are known to exist in great abundance, and, properly worked, cannot fail to give satisfactory returns. But the public is so wrapped up in South African gold mining enterprises that it is impossible to raise capital for anything else; and the ironstone, copper, and phosphate properties in Algeria fail to evoke the smallest interest. Yet there seems to be little reason to doubt the truth of the statements of engineers who have lately examined the mineral resources of Tunis and Algeria, that the phosphate beds may be counted among the richest of the world, and the discoveries that are continually being made show that they are practically inexhaustible. Their great value lies in the fact that, being of a purely sedimentary formation, they can be worked very easily and economically, and for the most part they have merely to be dug out of the soil without the necessity of underground working. They are situated principally on the southern slopes of the Atlas Mountains, in the neighbourhood of Chotts, and also at Gafsia, in Tunis, where the deposit has a length of 60 kilometres, and can be worked entirely at the surface. The mineral can be very easily crushed, and, containing but little iron and aluminium, it is particularly suitable for the manufacture of superphosphates. The demand for the mineral is so great that it has been found impossible to supply it in sufficient quantities, as, for the moment, the exploitation is confined entirely to the Tobessa district. In fact, the owners are unable to work their properties owing to their being unable to raise the necessary capital, and if they did so there would still be the difficulty of inadequate transport facilities, and the high tribute that has to be paid to the Algerian Administration. As a rule, the mineral contains 65 per cent. of phosphates, and this can be delivered at the European ports at 30 frs. to 32 frs. a ton, and is sold at 40 frs. The Algerian Government, however, claims a tribute of 10 frs. a ton, and it has the right of demanding as much as 20 frs. for mineral of a superior yield. This, of course, leaves no margin of profit whatever to the proprietor. It is likely, in consequence of an agitation that is being made by the mining companies, that these exactions will be very largely reduced, and it is certain that the transport facilities will soon be greatly increased by the putting in hand of the new system of railways. Had capitalists shown a disposition to take up the work of exploiting the mineral riches of Algeria and Tunis, these impediments would have been removed long ago, and the indifference of the investing public is alone responsible for the stagnation of mining enterprise in the colonies.

The long immunity of the French collieries from fatal accidents from fire-damp has been broken by a terrible catastrophe at Montceau-les-Mines, in the neighbourhood of Creuzot. The coal seams in this district are very thick, and are of an inflammable character, so much so that the setting on fire of a mine by spontaneous combustion is a by no means uncommon incident. It was found last week that a fire had broken out at the Sainte-Eugenie Pit, and a number of men were sent down to barricade the workings with a view of cutting off the fire from the rest of the mine. While the pitmen were engaged in this task there was a terrific explosion, and the nearly completed barricade was blown down. On a relief party descending into the mine it was found that of the 33 or 34 men who had been at work blocking up the gallery only eight were living, and they were taken to a hospital suffering severe injuries. Twenty-one dead bodies were recovered, and the rest were entirely consumed in the burning gallery. It is still an open question whether the accident was due to fire-damp, as the company contends that it arose from an explosion of dust—an hypothesis that seems to be a reasonable one in view of the exceedingly dusty character of the French mines. All sorts of expedients have been tried for laying the dust in the workings, but so far none of them have been successful.

FOUR MONTHS OF TRAVEL IN BRITISH GUIANA.*

By G. G. DIXON.

MR. DIXON'S journey was made in that portion of British Guiana known as the North-west district. Starting from Arawatta, an Indian settlement above the first falls in the Barima river, overland in a southerly direction to near the head of the Acaribisi creek, he followed the course of this creek to its junction with the Cuyuni river, then up the Cuyuni to the Government frontier station at Yuruan. Secondly, from Yuruan down the Cuyuni to the mouth of the Takutu creek, and from thence overland to its original starting point on the Barima. Thirdly, up that river to its source in the Imataca Mountains.

Mr. Dixon's motives for undertaking this journey were two-fold—first, to find a quicker and safer route from Georgetown to the Yuruan frontier station on the Venezuelan border. Knowing the length of time which it takes the Colonial Government to communicate with this station by boat up the River Cuyuni, and being persuaded, like many others in the colony, that the frontier could be reached in a much shorter time, with far less risk to life and property, by proceeding from Georgetown up the Barima river, and thence overland to the Cuyuni, Mr. Dixon determined to go over the ground himself, and so put this surmise to a practical test. His second object was to ascertain the truth of a report that the Barima river rose in Savannah country, occupied by Venezuelans with cattle ranches.

He accordingly set out from Georgetown on April 19 last, with provisions for four and a-half months, and six Indian carriers. The s.s. *Penwortham* landed them on the 20th at Morawhanna, the seat of the Government of the North-West district, a well-arranged and healthy town, surrounded by cultivated lands, standing where, only six years ago, all was swamp and desolation. From here, thanks to the kindness of Mr. Im Thurn the Government Agent, Mr. Dixon's journey to the falls was greatly facilitated. Two years ago the course of the Barima, from the mouth of the Acaribisi creek, was blocked with sunken timber, making it very difficult to find a passage even for small boats; but now, thanks to the energy of the Government, matters are greatly improved, and its course has been sufficiently cleared to admit of its navigation by steam launches. For about 100 miles the river winds between low-lying banks, thickly covered with tropical growth, the country gradually rising as the first falls are approached, the hills in their neighbourhood attaining an altitude of some 400 feet above sea level, rising gradually from the flats, their summits rarely being more than a few feet across. The course of the river above Acaribisi is very tortuous, few of its reaches exceeding 500 yards in length.

After leaving Morawhanna, the first indication of high ground on the right bank is an isolated hill called Mount Everard, which is the highest point reached at present by the coasting-steamer from Georgetown, where a good hotel, and a number of rest-houses have been erected for the accommodation of those engaged in the rapidly increasing gold industry. Twelve miles above this is the Government station at Koriabbo, where they exchanged the steam-launch for the slow-going tent-boat propelled by paddlers. For the next 30 miles the river-banks showed no signs of habitation, but, after this, Mr. Dixon passed numbers of storehouses and clearings, connected with the placer workings in the neighbourhood.

Six days after leaving Koriabbo, the party arrived at the Indian settlement of Arawatta, the starting-point overland to the Cuyuni river. They set out on May 1, following for some distance an old Indian trail, which led them over undulating country, traversed by innumerable creeks. After several days of this tedious work through tropical forest, they arrived at a Caribisi village, and were then able to follow the Indian trails from one settlement to another, until they reached the left bank of the Acaribisi creek, which, which they followed down stream.

After having constructed and launched bark canoes, the party reached the Cuyuni at last, and, having procured provisions from Indians living near, continued the journey up that river, and, after many hindrances and privations, arrived at the Yuruan frontier station, situated on the right bank of the Cuyuni, exactly opposite to where it is joined by the Yuruan river.

Here are quartered an inspector and six policemen, and close to this station, on the left bank, lower down the Cuyuni, is the Venezuelan outpost. Mr. Dixon was greatly struck by the difference between the means of communication between Caracas and her frontier station, and that existing between Georgetown and Yuruan. The former was being put, and by now probably is, in direct telegraph communication with headquarters, and has a road connecting it with the towns of Tumeremos and Guacipati, the mining district and the capital; while, on the other hand, a hazardous journey of from five to six weeks divides Georgetown from this isolated station.

After visiting several of the Venezuelan mines in the vicinity, Mr. Dixon commenced his return journey, and, after many misadventures, arrived safely at the mouth of the Takutu creek, and made his way overland to the Barima river, which he reached on July 8, after an absence of nine weeks and five days. During that time he had proved that the Yuruan frontier station can be reached in 14 days from Georgetown, even under existing circumstances—by steamer to the Barima falls, on foot overland to the Cuyuni, and in paddle-boats up that river. At Arawatta he started up the Barima; after many days of very slow and laborious travel he arrived at the Rocky river, where are situated the highest gold workings on the Barima. Mr. Dixon proceeded up-stream, and succeeded, in spite of many and various difficulties, in reaching the head of the river in the Imataca Mountains. Instead of its source being in savannah country, it is in heavy forest, and there are no indications of any human being having visited the spot before

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* Abstract of paper read last Monday before the Royal Geographical Society

MEETINGS OF MINING COMPANIES.

THE GREAT DUNDAS GOLD MINING COMPANY, LIMITED.

Excellent reports of the property.—A true fissure vein.

THE statutory general meeting of the shareholders of this company was held on Monday, at Winchester House, Old Broad-street, Mr. G. F. TAVENOR presiding.

The SECRETARY (Mr. Percival Tibbs) read the notice calling the meeting.

The CHAIRMAN said: Gentlemen, we meet this morning for the purpose of carrying out, as perhaps everyone is aware, the statutory rules in connection with a new company. Our company was formed, and went to allotment on October 19. The amount of share capital placed was 67,800 shares—that is to say, we have in hand our working capital plus 10,000 shares we reserved, and which we can use whenever we choose, and a sum of about £10,000 really in hand. The number of shareholders on our list—and it is a very comforting thought, because I think myself there is nothing like numbers in a joint-stock company, and more especially in a gold mining company—is between 600 and 700. We took immediate steps to see that the property was transferred, and we succeeded in obtaining information that on January 8 of this year the property was duly transferred to the company in the record books of West Australia. Now, gentlemen, I should be very happy to tell you something very hopeful and very encouraging, but so little time has elapsed since this company was inaugurated that really your directors have had enough to do to cast around as to the management of your property on the spot. Having a thorough knowledge that economy in a company of this character is a feature not to be disregarded, we have made arrangements with the Mawson's Reward Company for the purpose of securing as our manager on the field their very able manager, Mr. Brown. It makes it more easy for the manager of Mawson's Reward Company to superintend our own arrangements, inasmuch as our company—the Great Dundas—is only located about 1½ mile from the Mawson's Reward claim. Therefore, gentlemen, we can satisfactorily assure ourselves that we have made a most advantageous arrangement by not having to pay the expense of a manager going out to West Australia, but possessing one on the spot, and a man of experience, who will, undoubtedly be able to satisfactorily manage the property and carry to a successful completion, it is hoped, our mining claims there. Now, I may tell you this—and it is as well to let everyone know on what principle the company was started—your directors know at the present moment only just as much of the property as you yourselves know. The property was, if you remember, reported on by a gentleman of high experience and position in West Australia, by the name of Mr. H. P. Woodward. He is the Government Geologist there, and he, therefore, occupies a most unique position for the purpose of judging of the goodness or otherwise of mining claims. Now, Mr. Woodward said in his report, of which this is an extract:—"This reef is a large lode mass on the west or hanging wall side of a large ironstone vein, which rises about 50 feet above the level of the lake." He goes on to say:—"A shaft has been sunk 45 feet on the lode mass, the stone being very rich in the shaft for the first 15 feet, after which the shoot was lost, dipping to the south, but was again cut by a drive at the bottom of the shaft, from which some very good stone has been obtained." Mr. Woodward's report is essentially to the purpose, and I will read to you this. He says:—"The lode is a true fissure vein of great size, and will probably prove to carry gold all through when tested. The great size of the lode, richness of the stone, and distance at the surface it has proved to carry gold, all point to this as a very rich property." Now, it is a very gratifying thing to know that we have got the opinion of a gentleman so well placed in West Australia as the Government Geologist, who reports so favourably on the company. (Applause.) The next report that we had was a report of Mr. W. N. Angove, and he also reports that "the reef shows in a well-defined form at surface, and can be traced for some distance through the lease, and in all this gold can be seen in the stone." He goes on to tell us that "a shaft has been sunk for 47 feet on the lode, which from 20 feet is underlying 10° west. A rich shoot of gold was cut at 20 feet, dipping south." He tells us that "good coarse gold has been got from many parts of the lode, as well as fine gold. Many samples I crushed myself, from which good prospects of fine gold were obtained." He finishes up by saying—"I believe from the nature of the country and the immense size of the reef, being so easily worked, and the battery being placed close to the mine, this should be a good dividend-paying mine. I estimate the cost of raising and crushing stone at 25s. per ton; this will cover all expenses." Now, it was on the reports of these two gentlemen, you will bear in mind, that this company was originally floated in London, and up to this point you know just as much as your directors know. But there is a further confirmation of what these two gentlemen have said in the report which I am now holding in my hand. It is an official *ad interim* report of the Department of Mines for the half-year ending 30th June, 1894, presented to both Houses of Parliament by His Excellency the Governor of West Australia. Now, this being official, is about the most authentic data we could possibly bring forward. Under the head of various and sundry mines, we come to the Great Dundas. "Bromley, Mason, Dejarlais, and Blake: This reef is situated about 1¼ mile north-eastward of the Dundas Soak, and about 1½ mile south of the May Bell. It is a large lode mass on the west or hanging wall side of a large ironstone vein which rises about 50 feet above the level of the lake. This lode runs north and south with the country, and can be traced for a considerable distance at the surface, but its size is not known yet as it has not been crosscut from wall to wall. The rocks to the westward of the lode are hornblende schists, whilst to the eastward of the ironstone lode they are mica schists and granite, and some dykes of the latter cross the lode. A shaft has been sunk 45 feet on the lode mass, the stone being very rich in the shaft for the first 15 feet, after which the shoot was lost, dipping to the south, but was again cut by a drive at the bottom of the shaft, from which some very good stone has been obtained. The cap has been opened in many places, from all of which good prospects have been obtained upon crushing. A large supply of salt water will be struck at a depth of about 60 feet, below which the rock will be found to be solid, requiring but little timber. The lode is a true fissure vein of great size, and will probably prove to carry gold all through it when tested. The great size of the lode, richness of the stone, and distance at the surface it has proved to carry gold, all point to this as a very rich property. There will be an abundance of water in the mine for crushing, and there is plenty of timber on the spot; fresh water may also be conserved by constructing a large reservoir on the gully flat to the westward, near the shaft." The two reports of Messrs. Woodward and Angove are backed up by the Government report for the half-year ending June, 1894; therefore, I think you will agree with me that our prospects are of a very hopeful character. We have not yet received any news from Mr. Brown in reply to the requisition which the Mawson's Reward directors have made upon him to take charge of the management of the Great Dundas property, but I am quite sure that in Mr. Brown we possess a very energetic and pushing mining manager, and it will not be long, I trust, before we shall receive news from him in connection with his acquiescence in taking over the post we have confided to him. Now, gentlemen, I think the policy which the board has inaugurated is a very sound policy in connection with mining enterprise. The directors of this company are men who have had experience in mining companies, and they are all resolved to husband the resources, and to take care of the capital. They will do all that is necessary, in as energetic and pushing a manner as possible, while they will combine with a great study of economy and security, watchfulness in not spending money before it is actually required. I do not think I can say more at this moment than to say that, with reports of such a character as I have just read to you, and with a policy such as the board will carry through, if there is gold in the mine of good richness, we shall get it. When on a future occasion we have the pleasure of meeting you—possibly in a very much larger hall than this—to give you gratifying information of your venture, and to hear from you praise of our management and of the success of your property, it will be a moment to look forward to, and will amply repay us for our efforts to promote your interests. I have nothing more to say, but if any shareholder wishes to ask any question or to make any remark which strikes him as being pertinent to the occasion, I shall be delighted to give him any information in my power. (Applause.)

A SHAREHOLDER: Do I understand that this company was formed on the 19th October? Of course we have all read the very gratifying reports on which we subscribed, but has nothing been heard since?

The CHAIRMAN: You must bear in mind that the Dundas field is some little distance off the communication from Coolgardie, which means that correspondence has to come from Esperance down to Dundas. It may be some little time before we complete our arrangement with the Mawson's Reward Company, because although we wished them to allow their manager to take charge of our property, we had to wait until the directors of the company considered the position. Consequently that occupied close upon six weeks. Then we had to get the transfer of the property, and although we lost no time with this, it was not until January of this year we got that done. So that if you bear these two facts in mind you will see we have not lost much time. All the data have gone out, and Mr. Brown, when he receives our communications—which he has no doubt had—will be in a position to do all that is necessary. I have no doubt we shall get a cable shortly from him, accepting the engagement, and also asking us to supply him with a sum of money, which is the natural conclusion of the matter. I do not think you will find we have delayed the negotiations. We do not intend to order machinery until we are satisfied as to the exact requirements. The Chairman added, that any information of interest would be sent to the mining newspapers.

The proceedings then terminated.

GOLD FIELDS OF MASHONALAND, LIMITED.

Further favourable news from the Cotopaxi Mine.—A new company formed to work the Alice Reef.

The first annual ordinary general meeting of this company was held at Cannon-street Hotel, on Monday,—Mr. ROCHFORT MAGUIRE, M.P., presiding.

The SECRETARY (Mr. H. K. Evans) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen, I do not think it is necessary for me to detain you very long with any remarks, because I think the present condition of your property is very fully set out in the report. The report covers an unusually long period, and during that time the progress has not been so great as we certainly all hoped at the time the company was formed, because the difficulties arising out of the Matabele war delayed us quite a twelvemonth; and, in addition to that, I am sorry to say that the first crushings from the Cotopaxi reef did not turn out so satisfactory as we all hoped from the reports we received when first the machinery was erected and the development work undertaken. We took the opportunity, as stated in the report, of Mr. Hammond's visit to the country to obtain a report from him upon the mine, as it stands in its present state of development, and I regret to say that his opinion of the reef was not very satisfactory. He considered that it would require very careful working, and that unless the quality of the ore improved it was not likely to work at a very great profit; but I am happy to tell you that from our latest advices the condition of the mine is very satisfactory, for the manager has cabled to us stating that he has now got 3000 tons of 10 dwts. ore ready to send to the battery. This has been confirmed by the report of the crushing for the past month, which has been received since the publication of the report, namely, for 19 days' milling, 520 tons were crushed, yielding 288 ounces of gold, which gives rather more than 11 dwts. This, coupled with the intelligence of the rich body of ore that has been worked in the last drive, makes us hope that the future working of the Cotopaxi reef will be more satisfactory than the first few months' working. One would have been inclined to disregard the early results because the first few months' crushing of a reef is always more or less a chance, but, coupled with the intelligence in Mr. Hammond's report, we were slightly uneasy until we had this further favourable news. The next property that we are developing is the Alice reef in the Mazoe district, and you will see that a new company has been formed for the purpose of working that with the machinery which is already up in the country, and which is ready now to be erected on the Alice reef, and from that we expect to have results during the present season. It is stated in the report that the scheme has now been carried into effect. That is not strictly accurate, because the agreements have not been signed yet, although they have been prepared. The delay which has taken place has been caused by the fact that the Mazoe (Vesuvius) Company is a Johannesburg company, though the shares are largely held in this country, and it took some time to get the necessary proxies out for the meeting. With these remarks, I think the report may speak for itself. But I would like to point out that this Gold Fields of Mashonaland is in a much more favourable position than most exploring and developing companies which are working in Rhodesia, from the fact that we have already made our settlement with the British South Africa Company, and that any results that are acquired by this company will come altogether to the shareholders of this company, which is not the case in the greater number of development companies now working in Rhodesia. And I may further state that the British South Africa Company, which was originally allotted for its interest 50,000 of the shares of this company, still holds that interest intact. Shareholders may take this for what it is worth as to the opinion which the British South Africa Company forms of the possible future value of the shares. I shall now be happy to answer any questions that shareholders may put to me.

Mr. CUMMINGS said he did not see any very great advantage in the formation of the new company to which the Chairman had referred. It seemed to him that it meant extra expense to form another company as they had to pay a duty on the capital. The Gold Fields Company would provide most of the working capital and take the bulk of the shares, and he, therefore, thought it would be more economical if they were to buy the property and work it themselves without going to the extra expense. Perhaps the Chairman would explain the advantages to be derived.

The CHAIRMAN: I think there are several advantages; but the alternative which Mr. Cummings suggests was impossible, because the Mazoe Company declined to part with its mill unless an arrangement were made by which it and its property were taken into the new concern.

Mr. CUMMINGS: That is a satisfactory explanation.

A SHAREHOLDER: What becomes of the 62,500 shares?

The CHAIRMAN: They are the property of this company.

The SHAREHOLDER: You don't propose to distribute them?

The CHAIRMAN: Not at present.

The CHAIRMAN then formally moved—"That the directors' report and statement of accounts to June 30, 1894, be and the same are hereby adopted."

Mr. J. E. DUDLEY RYDER seconded the resolution, and it was unanimously agreed to.

The CHAIRMAN next proposed the re-election of Mr. J. E. Dudley Ryder and Mr. Harry Mosenthal, the retiring directors.

This was seconded by Sir ALEXANDER MONCRIEFF, and carried.

On the proposition of Mr. H. KELLY, seconded by Mr. B. SUTHERLAND, Messrs. Welton, Jones, and Co. were re-elected auditors, at a fee of 20 guineas.

A hearty vote of thanks was accorded to the Chairman on the motion of Mr. CUMMINGS.

CUMBERLAND GOLD MINING COMPANY, LIMITED.

Another good point struck.—The dam working well.

The statutory general meeting of the shareholders of the Cumberland Gold Mining Company (Limited) was held on Wednesday, at Winchester House, the chair being occupied by Mr. E. PONTIFEX.

The SECRETARY (Mr. Arthur Giffard) read the notice convening the meeting.

The CHAIRMAN said that the meeting was convened in accordance with the regulations of the statute, which required that a meeting should be convened within four months of the registration or reconstruction of a company. No report or accounts could be presented to the shareholders, and no resolutions had necessarily to be passed. The main object of the meeting was that the directors should inform the shareholders of the facts connected with the subscription of the capital. In their own case the whole of the capital had been subscribed for by shareholders in the old company. Of 184,890 ordinary shares, 171,940 were applied for rateably in proportion to shares already held, while the remaining 12,000 odd were taken up also by existing shareholders at a premium. There were only four dissentient shareholders who wished to be paid out of the company, and three of these were small holders, who had easily been settled with on moderate terms. The fourth was a rather large shareholder—holding some 3000 ordinary shares—and his claim had been submitted to arbitration. As the shareholders were aware, the time for reconstructing the dam had been pressing heavily upon the company. The wet season began in November or December ordinarily, and unless time were taken by the forelock, the whole year would be lost. The directors, therefore, assumed the responsibility, and cabled out before the company was reconstructed that the work to the dam should be at once recommenced. It was fortunate they did so, because the rains commenced earlier than usual, by which time, however, the works had sufficiently advanced to ensure the safety of the dam, and it was now in full working order. The responsibility might have been inconvenient for the directors, but reconstruction of the company having been carried out, it was lifted from their shoulders. As to the mine, the time which had elapsed since the November meeting was not sufficiently long to enable the developments to have progressed to a very great extent. So far as the work had gone, however, it had turned out satisfactory. Instructions had been cabled out to proceed with driving the No. 5 level under the point where good gold had been found in the No. 4 level. According to a cable just received, this point had been reached, and the gold there assayed 4 ounces 15 dwts. At present it was not very continuous, but it was hoped that, at a greater depth, it would become permanent. They had also received last month a cablegram to say that the treatment of the tailings by the cyanide process would be recommenced in about a week. No doubt this had since been done, so that very shortly they would be receiving profits from this as well as from the mine. In conclusion, he hoped that by the time the annual general meeting was held, they would be able to put some results before the shareholders.

A vote of thanks to the Chairman concluded the proceedings.

AUSTIN GOLD MINES, LIMITED.

The increase of capital confirmed.—"There is every prospect of a dividend by June."—Latest from the mine.

An extraordinary general meeting of this company was held on Tuesday, at Cannon-street Hotel, Mr. F. O. S. B. READE presiding.

The SECRETARY (Mr. L. J. Langmead) having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, I feel I must first explain the absence of my colleagues—your Chairman and Mr. Hudson. These gentlemen live a long distance from town, and, seeing that the work before us to-day is of such a simple nature—merely that of confirming a resolution passed by you a fortnight since with such unanimity and pleasure—they ventured to think you would excuse their absence, and save them a long and cold journey. This, I feel sure, you will willingly agree to, the more so since King Frost has been so inconveniently attentive of late. Before I ask you to confirm the resolution, which the secretary read to you with the notice convening the meeting, you will, I am sure, like me to take the opportunity of giving you the latest information we have from Australia. You will remember reference was made by the Chairman, when we last met, to a cable which was mutilated in transmission, and could not be properly deciphered, but the latter portion of which referred to a possible dividend by June. The actual wording of the message is as follows: "There is every prospect of a dividend by June." This is certainly most cheering, and, if realised, will make us justly proud of our property, and of the energetic management of our local board. The cable further states that on the Golden Gate the underlay shaft being sunk has struck the lode, which is 3 feet thick, with a rich gold-bearing vein. The pumping machinery and winding plant will be working by the first week in February (and is, therefore, probably now in full swing), and the battery is expected to be ready by the middle of March. The ore available for crushing (which, we understand, to mean at grass) amounts already to 1000 tons, and the cable winds up with the very satisfactory statement: "We can keep 20 stamps at work, day and night." This points, I should think, to the fact that development work is proceeding apace. Your board has ordered a cyanide plant, as the tests carried out in Melbourne have shown the ore to be exceedingly suitable to the process, a high extraction having been obtained. We look forward to very satisfactory results from the use of the process. In a letter of December 31 from the local board, under the heading of mine reports, the following paragraph, which I will read you, will, I am sure, prove interesting:—"During the week Messrs. Pirrie and Ferrey had an interview with Mr. Callahan, the American expert referred to by Mr. Pirrie in his report. He had just returned from the field, and has given the most favourable opinion as to the prospects of the company, Mr. Callahan expressing his opinion freely that he had preferred our property to any other on the island, the gold being more evenly distributed throughout the ore. The question to be decided was how the reefs would turn out at a depth; but he saw nothing to cause him to think they would not live down to a depth. He considers Mr. Aldridge, our mining manager, a capable man, who understands his business, and who is most careful in spending the company's funds. He also expressed the opinion that he should be able to get ample ore to keep the battery going as soon as it is ready. Mr. Callahan inspected the battery, which was then being shipped, and expressed his opinion that it was the best possible type for our ore. The weight of stamps was what he would have selected for himself. The drawings of the winding and pumping plant also met with his full approval as being the most suitable for our purpose. The London board will doubtless be gratified at having these favourable opinions from one who is acknowledged to be one of the best gold mining experts of the day." I am sure you also, with ourselves, will be pleased to hear that. This Mr. Callahan, as our colleague, Major Ricarde Seaver, told you the other day, is a most cautious and reliable expert; consequently his opinion carries great weight with us, and we consider that we have been most fortunate in thus obtaining so valuable an opinion in such a friendly manner. In another letter, dated January 8, to hand this morning, we have some further very satisfactory points in connection with the Evening Star property, which I will read to you:—"I need not refer again to my opinion of the Evening Star claim. This I set forth in my report, but, independent of its intrinsic value as a mine, it has a special value to the Austin Company, more especially since I was there, as the trend of the lode makes it more than ever of the greatest importance to us to secure it, as it will reduce the cost of our operations very considerably, besides giving us a large body of stone to go on crushing with as soon as the battery is ready which I expect it will be in about two months." That quite corresponds with the cable news which we had to that effect. "Having

seen the property, and knowing its value, I cannot too strongly advise that it should be bought on the terms offered. I see no reason why the Austin Gold Mining Company (Limited) should not be in a position to pay dividends from June on the proposed capital of £75,000. If we secure this Evening Star it will enable Aldridge to develop the other portions of the mine in a proper manner, so as to be able to equalise the output of gold without hunting out rich patches." I think that is an exceedingly favourable point. Mr. Trubshawe has received a letter from a perfectly independent source, in which reference is made to the Austin by a gentleman who has been in that neighbourhood, and he speaks most highly of it.

Mr. W. TRUBSHAWE: Mr. W. T. Harding, the gentleman referred to, says:—"I have heard very good accounts of the Austin Mine, and was also very pleased with what I saw at the Golconda adjoining. The Lake Austin Island seems to be very rich in places, and a very large amount of gold has already been taken out by the diggers."

The CHAIRMAN: Everything seems to point to the fact that our property is an exceedingly valuable one. I think, gentlemen, this is all the information we have to give you, and I will now move the resolution which we have been called upon to confirm to-day.

Mr. TRUBSHAWE seconded the resolution, and remarked that it would be a great advantage to the company to acquire the Evening Star property, and to increase its capital accordingly.

The resolution was unanimously carried.

Mr. R. GAMBLES proposed a vote of thanks to the Chairman.

Mr. GREEN seconded the motion, which was adopted.

The meeting then closed.

GRESHAM GOLD EXPLORING SYNDICATE.

A property to be acquired in West Australia.

The statutory general meeting of the shareholders in the Gresham Gold Exploring Syndicate (Limited) was held on Tuesday, at Winchester House, the chair being occupied by Mr. J. J. WALLACE.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, this meeting has been called in compliance with the Act of Parliament, and it is a little unfortunate that it should have been held so soon, and also upon what happens to be rather an important day upon the Stock Exchange, with which body most of the members of this syndicate are connected. The company was registered on October 12, and we lost no time in sending out a representative to the Australian colony. Mr. Gray took many valuable letters of introduction with him, one to Mr. Woodward, the Government Geologist of West Australia, some to merchants and others, and, after consulting with them, he decided that the best thing for him to do would be to visit the Murchison gold fields, because he thought that at the time Coolgardie was very much rushed. He saw several properties in the Murchison district which he thought were very good, and he also saw two or three, which, if amalgamated, he thought would be exactly what the syndicate wished to take up. Up to the present, however, we are not aware that he has accomplished the object of his visit. To-day he is at Coolgardie, and seems to have visited a good many mines there. There seems, however, to be a good deal of difficulty in securing properties, from the simple fact that very large sums are asked at Melbourne, Perth, and the different centres, while practically all the best mines are under offer for two or three months—so that it is difficult for us to get exactly what we want. The object of this syndicate is to get a good mine, and bring it out upon reasonable terms; and we shall do it as economically as possible. Our last cable from Mr. Grey is to the effect that he has several good properties in view; but we require time to consider them, and I think it will be far better for us to go slowly and cautiously to work. At any moment we may have a very satisfactory message from Mr. Grey, saying that he has got a property which he thinks will suit. In that case we should have to pay a deposit, and he would thoroughly examine the mine and get his opinion confirmed by an expert. We hope that within a few weeks we may be in a position to call you together and ask you to consider such a proposal.

A vote of thanks to the Chairman terminated the proceedings.

HANNAN'S BROWN HILL GOLD MINING COMPANY, LIMITED.

A concurrence of testimony as to the property.—A brilliant outlook, and some phenomenal assays.

The first ordinary general meeting of the shareholders of the Hannan's Brown Hill Gold Mining Company (Limited) was held on Thursday, at Winchester House, the chair being occupied by Mr. J. J. WALLIS.

The SECRETARY (Mr. H. Slaney) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, we are glad to see you here to-day, because your presence shows that you take an interest in the undertaking. We have called you together much earlier than we should have done, but, unfortunately, the Act of Parliament does not admit any choice on our part, and we have, therefore, convened the meeting within the four months. We have delayed it until almost the last moment, because we felt we might receive some important telegram from the mine which would interest you. What I have to tell you to-day is of a most pleasant character. All the capital of the company was subscribed with the exception of £10,000, the intention originally being that we should have £10,000 working capital, and a reserve of 10,000 shares for future issue. I am happy to tell you that we have already sold 2000 of the reserve shares at 10s. premium, so that practically we have £13,000 working capital. Of course our intention is to place before very long the remaining 8000 shares, and we shall try to get as large a premium as possible. We have so much confidence in the mine that it is a question with the board whether we should be justified in selling them at so small a premium as 10s.; but we shall do, of course, what we think is best in the interests of the company. The property was transferred into the name of the company so far back as October 22nd, and we have lost no time in ordering the machinery. At the present time we have three 16 horse-power oil engines on the way, and, in the course of a few days—or early next month—we hope to ship the other machinery, including the rolls and the cyanide plant. We expect also that within four or five months we shall be in a position to announce the crushing of stone. We have appointed as manager Mr. Varden, who came to us with the very highest testimonials. We could not send him out quite so early as we might have wished, but he has visited the mine, and yesterday we had a telegram from him which, I think, you will consider satisfactory. He says:—"The shaft has reached a depth of 130 feet. It has not yet reached the water level. The vein was intersected at a depth of 106 feet, where the ore showed free gold. The 60 feet level has been driven 60 feet in one direction in rich ore, and 30 feet in the other in good ore. It has the appearance of a good bit of ore. Have sunk the winze from surface 50 feet. The ore continues to be very good. The rich streak is about 4 feet 4 inches thick as far as can be seen. A crosscut has been put out from the shaft 45 feet. We are at present crosscutting to the vein ont he 120 feet level. As there is no assay office on the mines, samples have been sent to Coolgardie; but as your letter of instructions only arrived here yesterday, the time has been too short to receive the result of this assay." Well, Mr Lapage, one of our directors, is here to-day, and will tell you something about that presently. In the meantime, I should like to tell you that the Govenment, as probably you are aware, has purchased 26,000 tons of 45 lb. rails, for the purpose of constructing about 350 miles of railway in the Coolgardie and Murchison districts. That, I think, is very good evidence that they entertain a very high opinion of the West Australian Gold Field; and as to that matter, I may mention that I was the other day looking at the statements as to the quantities of gold produced there in recent years, and I can, perhaps, make the comparison clearer to you by saying that if in 1890 a threepenny piece would have represented the yield of gold, in 1891 it was 6d., in 1892 1s., in 1893 a 2s. piece, and in 1894 a 4s. piece. What it will be this year remains to be seen, but I think we shall have no silver coin which will be large enough to represent the volume of gold which will be brought from Western Australia. (Hear, hear.) We have heard a great deal about Western Australia, and I do not think it would be either wise or kind of me to make any remarks about other mines than ours. We believe our own little bantling is the best, of course, and I am quite convinced that we have in this mine a magnificent vein of ore, proved most thoroughly in depth, and see no reason, whatever, to doubt that this will turn out to be one not only of the first-paying mines, but also one of the best. Of course, some people think that because they get an enormous mass of gold on the surface it must be a more valuable mine than ours, but when you get a vein of gold like this there is no doubt that the supply is almost inexhaustible. We have heard of 5 ounces to the ton, and Mr. Lapage will tell you of some samples of a much higher value than that, but if we can feel assured—as I believe we can—that 2 ounces of gold can be continuously got from the mine, we shall have a most valuable property.

Mr. ALGERNON MOREING said: Mr. Chairman and gentlemen, I do not know that it is altogether usual for a consulting engineer to address the shareholders at a meeting, but, still, as I am perhaps a little more than consulting engineer to this company, because I have, as manager of the London and West Australian Exploring Company, been to a certain extent responsible for bringing it before you and the other shareholders of this company, I may say a few words. My opinion of the mine originally, as one of the most remarkable yet discovered in Western Australia, was strongly impressed upon me by the reports of my own firm in the colony. My own representatives there were at first hardly able to believe the extraordinary results which they obtained from the vein of this property. The vein is not one of a sensational appearance on the surface. It does not contain lumps of solid gold, like some of the other properties in West Australia, but the gold is disseminated all through the stone in such a way as to be hardly distinguishable to the naked eye. The stone is of a brown, homely appearance, which an ordinary individual without any knowledge of gold ores would probably pass over many times and not take the trouble to pick up. When our representatives first went to the field they took off average samples of this ore and had it assayed, and the results were so extraordinary—going from 20 and 30 ounces to 70 ounces—that they were unable to believe them, thinking that some mistake had occurred. The result was that they returned a second time to corroborate the assays, with very similar results. We were still not satisfied that the veins could be so very rich, and another engineer, well known out there as being one of the most careful engineers in the country—Mr. William Thompson, the general manager of the Hampton Plains Estate Company—was sent out to report. After making every allowance, he found that the average samples of the ore went up to 10 ounces to the ton. It was upon these statements that we decided to purchase the property, and I am glad to say that every single expert and engineer who has been over the field, and has either returned to this country or written, has confirmed the original statement made about it by these gentlemen. Some of the best known mining engineers of to-day have been over the property, and have reported most highly about it. Mr. Bratnober, one of the most experienced mining engineers living, was extremely pleased, and Mr. Cordner James has confirmed everything that has been said about the property, while we have had much independent testimony from other quarters to the same effect. We, therefore, feel in this case absolutely certain of the property being what we originally thought it was. In my mind there is no doubt, and I am sure that is a statement it is very unusual to be able to make about a mine. At present we can see down to a depth of 106 feet, and there we find the vein as rich, if not richer, than at the points on the surface where the samples I have been telling you about were taken. (Applause.) Of course, West Australia is a very long way off, and Coolgardie is a very far-away part of West Australia, and I think it is extraordinary that your directors should be able to come before you to-day, four months after the formation of the company, and tell you what wonderful progress they have already made in the development of this mine. Fortunately they have command of the telegraph, and have also had at command an organisation in West Australia which enabled them the very day after they had formed the company and got possession of the property to commence development. Otherwise it would have been impossible to report to-day that the vertical shaft had been sunk 130 feet, and a large amount of ground developed, and the ore got ready for crushing at the 60 feet level. The great difficulty in West Australia is that of water, and it has been used by the enemies of the colony and those who are, perhaps, a little envious of the wonderful developments which have taken place there, and who point to this difficulty as the one that must ultimately wreck the field. Your board and I had given the water question the very greatest consideration, and we are perfectly satisfied that, so far as West Australia is concerned, it is only a temporary difficulty, which will ultimately be to the advantage of all those who are desirous of acquiring some interests in the colony. There is no doubt that with these enormously rich veins, placed as they are in that colony, if there were plenty of water at command, none of you who represent the capitalists of this country, would have an opportunity of putting you money there in such a way as to give you very large profits, as it undoubtedly will. No doubt it will ultimately be materially advantageous for us and for the colony that the country is conditioned in this way, and it is quite a ridiculous argument that these gold fields are useless, because it is a little difficult to get gold out. That, in my opinion, is one of the greatest points in their favour rather than to their detriment. If water is not found in sufficient quantities in the neighbourhood to mill all the vast quantities of ores found there, then undoubtedly the ores will be taken to where there is ample water—(applause)—and that is at no inaccessible distance from Coolgardie. Within 300 miles of Coolgardie there are inexhaustible supplies and magnificent rivers where all the ores of the colony could be treated. A farthing per ton per mile would be only 8s. 4d. per ton, and what is that with ore going even 1 ounce of gold to the ton? It is absolutely insignificant, and consequently all we require to get over the water question, is the outlay of a little capital, and your opportunity in this country is to provide that capital, and the profits on it will be, undoubtedly, enormous in the future, and greater than we have seen in any other gold fields that have yet been brought to the English public. To come back to our own mines, the directors and myself gave very great consideration to the question as to how we should treat the ore at Brown Hill in view of the temporary difficulty in regard to water, and we called into consultation Mr. MacArthur, of MacArthur-Forrest celebrity. Mr. MacArthur designed for us a plant, in my opinion, to treat the ore almost as cheaply as the ordinary stamp battery with plates, and use at the same time a minimum quantity of water, which may be salt, without injuriously affecting the operations. The method adopted is to crush the ore dry by means of breakers and rollers, instead of wet, as is the usual process, these breakers and rollers being driven by means of oil engines, which require no water boilers. The dry ore is then put into barrels and amalgamated by the aid of cyanide and mercury. Now, we know we have at Hannan's a sufficient supply of salt water for any purpose, and, therefore, you can see we have absolutely guarded ourselves against any possible failure by our mill when once it is erected. It has taken us a little longer than if we had at once rushed in and ordered an ordinary stamp mill. However, I am glad to say a great part of the machinery has been shipped, and almost the whole of the balance is leaving this week for Freemantle by direct steamer. We can see, therefore, that in a few months we may hope to see the mill erected and working. We know we have got a fabulously rich vein, unless everybody who has seen it has been mistaken; we know we have a mill that will work whether we have plenty of water or have to confine ourselves to the salt water we have there, and I think that under these circumstances all we have to do is to wait patiently a few months more, and we shall see results coming from this property which will probably be an eye-opener to all connected with gold mining in West Australia. Personally, I feel satisfied that in the long run the steady crushings from the vein, such as we possess, will eclipse all the sensational discoveries where gold has been taken away on the backs of camels. (Applause.)

Mr. R. H. LAPAGE said: Gentlemen, I have just returned from this mine, and I daresay you would like to know a little of what I saw being done there. This mine was one of the first I went to see. In fact, I was endeavouring to procure it for a company I was representing there, but I found that gentlemen in London were before me; however, on my return to London, they kindly offered me a seat on the board, which I gladly consented to take, as I knew the mine well, and believed in it thoroughly. As to the work in progress, when I was there there were two shafts sunk on the reef, and a number of crosscourses cut, and in no one of these places did we fail to procure gold. I may say that I spent three or four days on different occasions prospecting and testing this mine, and I happened to be there when the engineers sent by this company were testing this mine, and was thoroughly satisfied with everything I saw, and quite satisfied that the mine would turn out a very payable one indeed. Some of the samples I brought home I gave to the directors, and there was one that I took out myself from the vein, which was then about 5 feet broad, and I think the directors will support me when I say we could see no gold in it. It was sent to be assayed, and it gave 26 ounces to the ton. (Applause.) Some specimens sent to me show the stone is full of fine gold and there is any quantity of that in the mine. This stone was assayed afterwards by one of the engineers, who found it to contain 6 ounces to the ton. There is no doubt that, apparently, there is no limit to the supply of the crushing material. The lode is some 30 feet wide in parts of the shaft, and when tested all along its course, was found to contain gold in all its parts. With regard to the water question, I know that water has been found about a mile east of the property by the Government in what they call a borehole, and they struck water at 120 feet, so I do not anticipate there will be any difficulty with regard to that. (Hear, hear.) Also they had found water in a mine within a mile of ours to the north. It is a great pity there is no assaying plant at Hannan's. We hope, however, soon to have one there, and we shall be able then to let you know how the ore turns out as we continue sinking. I am sure you may rest assured that, with a very moderate expenditure, this would be a very payable mine, and that you may expect, when crushings do commence, to hear something very good (Applause).

Mr. F. A. THOMPSON, Chairman of the West Australian Exploring company, the parent enterprise, confirmed all that the Chairman and Mr. Moreing had said. He was engaged with Mr. Moreing in the inception of the company, and was rather surprised at the extraordinary character of the reports of the property. There was not an expert, however, who had examined the mine who did not confirm, and in many instances more than confirm, the original statements made, and that in mining was very unusual. It was due to the board and the officers that a vote of thanks should be given them from the shareholders for the remarkable progress they had made in the development work and in the selection of the machinery. (Applause.) Such a vote he had great pleasure in moving. He had no hesitation in saying that he returns from Hannan's Brown Hill would soon make the shares more than double in price.

Colonel THOMPSON seconded the vote, which was carried by acclamation.

A suitable acknowledgment from the CHAIRMAN terminated the proceedings.

KABOONGA GOLD MINING COMPANY, LIMITED.

The company successfully reconstructed.

The first (statutory) general meeting of this reconstructed company was held yesterday, at Winchester House, the chair being occupied by Mr. J. A. TRAVERS.

The SECRETARY read the notice convening the meeting.

The CHAIRMAN said the meeting had been called within four months of the registration of the company, in accordance with the regulations of the company law. The board would have preferred waiting a little longer, until they were able to announce that the wash-dirt containing the gold—which they had abandoned some few months ago—was again reached. Since the new company was registered on October 18th last there might be some shareholders present unacquainted with its past history, and upon that he might say a few words. In September and October they had just reached the alluvial. This was not the alluvial from the main river bed, but some good alluvial that had improved considerably, though it was not sufficiently rich to pay expenses. The gold on the other side had come absolutely to an end, while there was only a shot or two remaining in the locker; and had not the shareholders agreed to reconstruction, they might have continued working away at a loss. The shareholders agreed to reconstruction on the basis of a 6d. liability, of which 3d. was to be called up at once. The reconstruction was perfectly successful. All the shares were taken up, and the present company consisted of almost exactly the same number of shares as the old company—viz., 499,258. The 3d. payable on application had come in satisfactorily, and produced something over £6000. Some 8000 or 9000 shares had remained unapplied for—chiefly those in the hands of executors—and these were sold by tender. The mine had previously been prepared for shutting down, but as soon as the money came in some was sent out to the mine, the whole of the machinery was put into order, and pumping was recommenced. When they got some 200 or 300 feet down, some slight defect occurred in the apparatus, and the pumps ceased to deliver their full amount of water. By the beginning of January, however, the water was out of the mine, and an examination showed that up to where the drive divided the property but very little damage had been done. At present the manager was continuing the main drive, and early that morning had dispatched the following cablegram:—"Have driven 130 feet. We shall rise about the beginning of next week. I expect to reach gold within a month from the present date. Everything going well at the mine." Next week, no doubt, he would put up the rise, and would then find himself in the best part of that alluvial in which he had been before, and would endeavour to get some indications from that as to where the best part of the alluvial lay. He should more than half pay his expenses, and the gold should rapidly increase.

A vote of thanks to the Chairman terminated the proceedings.

THE DEEPEST MINE IN AUSTRALIA.—In the east crossent in Mr. G. Lansell's 180 mine on the Victoria Hill, at a depth of 3100 feet, a spur in which gold was seen was met with (says a Bendigo paper). "This is the deepest mine in Australia, and it is consequently the deepest gold yet discovered. The meeting with gold-bearing stone at this depth is of the greatest importance, and thus further indicates that the auriferous formation in the Bendigo district goes down to unascertained depths. At 3000 feet another crosscut is being extended in search of the top of the reef, of which the leg was met with in the 3100 feet crosscut. Mr. Lansell is to be complimented on his energy in deep sinking. Should he get a payable reef his success will be well deserved, and it will put fresh life into deep sinking."

WE learn that George Seymour, Esq., A.R.S.M., M.Inst.C.E., of the firm of Messrs. Bainbridge, Seymour and Co., St. Helen's-place; sailed yesterday per s.s. *Australia* for Western Australia.

EAST RAND PROPRIETARY. Report by Mr. ALFRED LEWIS.

Name of Company.	Issued Capital.	Shares held by East Rand.	Present Market Value.	Reefs opened up.	Claims that are Gold bearing	Claims originally pegged.	Tonnage in the mine.	Worth a profit per ton.	Profit.	Proportion of East Rand Profits.
Driefontein	£120,000	£ 77,752	£ 38,876	North Reef	60	1,712	1,800,000	10s.	£ 900,000	£ 583,125
St. Angelo	150,000	144,416	72,208	North and Ginsberg	34	—	1,360,000	15s.	1,020,000	981,253
New Comet	75,000	64,364	160,960	North Reef	25	—	1,900,000	15s.	750,000	643,500
Agnes Munro.....	93,000	62,494	43,745	" "	12	—	360,000	15s.	270,000	181,450
Cinderella	100,000	78,417	39,203	Reef and Leader	50	—	1,000,000	10s.	500,000	392,720
New Blue Sky	150,000	129,055	64,527	Reef and Leader	50	—	1,000,000	10s.	500,000	431,665
Leeuwpoort	100,000	7,000	1,050	Kimberley Series	—	—	—	Not proved	—	—
Driefontein Farm Deep Levels	—	544 Claims worth £6,000 a claim.	3,324,000	North and Ginsberg Reefs	554	—	16,620,000	15s.	12,465,000	12,465,000
Leeuwpoort Farm...	—	130 Claims (doubtful value).	—	—	—	—	—	Not proved	—	—
Vogelfontein Farm Deep Levels	—	136 Claims worth £2,000 a claim.	272,000	Reefs and Leader	136	—	2,720,000	10s.	1,360,000	1,136,000
			£4,016,569		921		25,860,000		£17,765,000	£17,038,713*

* This amount is less 25 per cent. to H. F. Syndicate.

Six outcrop mines when amalgamated with the Deep Levels, and with 40-stamp batteries crushing 400,000 tons a year, will give a life of 64 years and return £20 a share in dividends, or 33 per cent per annum.

ELECTRICITY AS APPLIED TO MINES.

An ordinary meeting of the Northern Society of Electrical Engineers was held on Monday evening, at the Palatine Hotel, Manchester.—Mr. HENRY EDMUNDS, the President, occupied the chair.

A vote of condolence was passed with the relatives of the late Mr. George Preece (Vice-President) and a committee was appointed to take steps for raising a memorial fund to be devoted to providing premiums for the best papers read in connection with the society.

Mr. G. S. CORLETT read a paper on electricity as applied to mines. He said the cases in which electricity was applied in mining work were rapidly increasing, so much so that it seemed beyond all doubt that in the near future electric mining work would form one of the important branches of their business. It had been used in mines for signalling, telephones, blasting, lighting, and transmission of power. So far as he had been able to ascertain, electric signals were introduced into some Yorkshire collieries about 20 years ago, and had since been extensively adopted. The present Coal Mines Act provided that signals must be arranged to ring in both directions—that was a bell at each end. The advantage of electric signalling for mines was the speed at which signals could be transmitted over any distance. For example, in some of the Durham collieries, where the roadways extended for 4 miles from the shaft, signalling by the old "Rapper" method often involved three or four men stationed at different parts of the roadways to transmit the signals forward. With the electric method, of course, it was just as easy to signal 4 miles as 100 yards. Speed in signalling also tended very largely to safety in working. In cases of accident, the haulage rope carrying loaded trucks could be stopped by pressing the wires at any point along the roadway, and, in his own experience, that had been directly responsible for saving several workmen's lives. There was the further advantage that the attendant at each station knew by the signal where the train was starting from or proceeding to, as the case may be. Telephones had also been used very largely for surface work for communicating with the various departments, but only to a limited extent below ground. So many collieries had electric signal wires running into the workings, and it was such a simple and inexpensive matter to attach telephones to the signal wires that it was a surprising more use had not been made of those instruments for underground work. In connection with the use of electricity for blasting, following the strong recommendation—almost amounting to an instruction—of Her Majesty's Inspector of Mines, most collieries had now adopted the electrical method of shot-firing. Shot-firing in mines had been the cause of such numerous accidents, occasioning in too many instances wholesale destruction of life, that the subject deserved some consideration at their hands. He did not wish to say that the sad accidents that had occurred were due even indirectly to electricity. There had been even in that small branch of electrical work a battle between high and low tension. High tension was adopted first, but was now being gradually replaced by low tension apparatus. Many important advantages were possessed by the latter, and he thought in the near future high tension exploders would be very little used. Discussing the question of lighting collieries by electricity, Mr. Corlett said most collieries had a fan engine with a large surplus of power, and it was often suggested that that should be used for dynamo driving. He thought, however, there were very few cases in which it was advisable to do that. Usually there was space in the fan engine-house to receive an engine and dynamo, and a more suitable place could hardly be found. As to underground lighting, the conditions might be briefly summarised thus. The whole of the lighting was required during the day, but at night only a few lamps at each pit bottom or mouthing were used. During repairs, certain sections of the underground lighting might also be wanted during the night. Those conditions implied that the best arrangement was to have a cable connected with the surface installation sufficiently large to supply the whole of the lighting with only a small loss—say 4 volts—and to use lamps of the same voltage as on the surface. Owing to the present state of the coal trade colliery managers were not inclined to go to the cost of the work. The question of providing suitable hand lamps for miners was one that had occupied electrical engineers' attention for a long time, and although very much had been done in the way of experiment, and many different types of lamps had been brought out, yet, up to the present, he knew of none which he could, with any confidence, recommend to a colliery engineer to place in the hands of his workmen generally. For some of the officials, and for certain special purposes underground, portable electric lamps, fitted with accumulators, could now be obtained, which worked fairly well if the instructions as to charging were carefully attended to and the lamp itself was kept in a vertical position, but should there be a little carelessness on either of these points, trouble and annoyance immediately resulted. Another very great difficulty was that, up to the present, no practical apparatus had been devised which could be attached to such lamps to indicate the presence of gas. Mining engineers had for some time past been considering the possibilities of electricity as a means of transmitting power in their mines. A certain amount of work had been done, for the most part successfully, but excepting in a few cases the plants installed had been of small size and of somewhat experimental character from a mining engineer's point of view. Colliery managers, it must be remembered, were directly responsible for the lives of their employees, and, not unnaturally, looked with some doubt upon the new power, especially since every failure was by interested parties brought into prominence. Then the wildly incorrect statements made by electrical men had done much to deter electrical work. Colliery managers had been assured that the combined efficiency of engine, dynamo, cable and driven machinery would be 90 per cent. Such a statement was, of course, absurd, but its very absurdity was prejudicial to their interests, as the colliery manager naturally concluded that they knew nothing of their business.

TIN TICKETING.

A TICKETING for tin ores was held at Tabb's Hotel, Redruth, on Tuesday, with the following result:—

VALUES OF ORES SOLD BY EACH MINE.

	Tons cwts.		Per ton.		Value.	
Dolcoath No. 1	14 0	.....	£36 5 0	.....	£507 10	0
do No. 1a	13 0	.....	36 10 0	.....	474 10	0
do No. 1b	13 0	.....	36 15 0	.....	477 15	0
Wheal Grenville a	20 0	.....	37 7 6	.....	747 10	0
do b	15 0	.....	37 5 0	.....	558 15	0
East Pool a	16 0	.....	32 5 0	.....	516 0	0
do b	15 10	.....	31 7 6	.....	486 6	3
do No. 2.....	1 10	.....	14 17 6	.....	22 6	3
Tincroft	15 0	.....	31 2 6	.....	466 17	6
do	15 0	.....	31 2 6	.....	466 17	6
do.....	3 0	.....	11 5 0	.....	33 15	0
Carn Brea No. 1	16 0	.....	31 10 0	.....	504 0	0
do No. 1a	15 0	.....	31 7 6	.....	470 12	6
do No. 2	1 0	.....	22 7 6	.....	22 7	6
South Frances No. 1	13 0	.....	35 7 6	.....	459 17	6
do No. 1a	12 0	.....	35 12 6	.....	427 10	0
Cook's Kitchen	16 0	.....	36 10 0	.....	584 0	0
Killifreth	16 0	.....	35 7 6	.....	566 0	0
West Kitty	13 0	.....	36 17 6	.....	479 7	6
Phœnix United	9 0	.....	35 17 6	.....	322 17	6
South Condurrow	8 0	.....	37 12 6	.....	301 0	0
New Pk. of Mines	3 0	.....	39 12 6	.....	118 17	6
	263 0				£9014 12	6

Average price per ton £34 5s. 6d.

AVERAGE PRICES PER TON.

Nov. 7	£37 15 6	Jan. 1.....	£33 0 2
Nov. 20	37 12 4	Jan. 15	33 12 11
Dec. 4	35 10 10	Jan. 29	35 6 6
Dec. 18	35 9 5	Feb. 12	34 5 6

GOLD AND SILVER OF THE WORLD.—According to the last report of the Director of the Mint the estimated amount of gold money in the world is $3,965,900,000, and the estimated amount of silver money $4,055,700,000. This gold and silver money is chiefly distributed as follows:—

	Gold.		Silver.
United States	$626,600,000	.....	$425,30 ,000
United Kingdom	550,000,000	.....	112,000,000
France	825,000,000	.....	492,200,000
Germany	625,000,000	.....	215,000,000
Russia	455,000,000	.....	48,000,000
Austria-Hungary.....	130,000,000	.....	121,000,000
Egypt	120,000,000	.....	15,000,000
Australia	105,000,000	.....	7,000,000
Italy	96,000,000	.....	30,000,000
Japan.....	80,000,000	.....	88,300,000
India	—	.....	950,000,000
China.....	—	.....	750,000,000

MEXICO'S MINERAL WEALTH.—The number of mines now being worked in Mexico, according to recent data, is at least 3000, with others worked only at intervals, and still others whose operations are hardly worthy of mention. If to these are added the large number of abandoned claims, many of which, if reopened, would yield important returns — even greater in some cases than those now in course of development — the total would reach "incredible figures," while new mines are being discovered day by day, says the *Mining and Scientific Press*. The total amount invested in the silver mines of Mexico is roughly estimated at $800,000,000, of which not more than one-eighth is American capital, while only an amount equal to one-third of the latter, or $33,000,000, is British capital. The annual yield of Mexican silver and gold collectively is set down at about $40,000,000. The output of copper figures at about $2,500,000, and of coal at $4,000,000. If we include iron, sulphur, marble clay, mercury, salt, stone, and metalloids, the estimated annual total of mining products would amount to not less than $65,000,000.

THE ENGINEER'S YEAR BOOK FOR 1895.—We have received a copy of this valuable year book, a work which has deservedly met with great success. One might almost call it a wonderful compilation, so complete does it seem to be. A large amount of additional matter has been incorporated in this new volume; an extended logarithm table has been added, also notes on refrigerating machinery. The "Steam Engine" section has been largely rewritten, the formulæ and tables relating to the properties of steam having been revised on the lines indicated in Professor Cotterill's excellent treatise. The portion of this section relating to "Proportions of Parts of Steam Engines" has likewise been considerably extended by the addition of important details. Mr. W. H. Booth has entirely rewritten the section dealing with cotton mills. In the "Marine" section, full descriptions are now given of the Thorneycroft, Yarrow, and Belleville tubular boilers, and additional and revised information on lighthouses.

WHITE FEATHER UNITED GOLD MINES (LIMITED).—We are informed that Mr. F. Bowes-Scott has been appointed manager of these mines and will sail for Australia on the 22nd inst.

OVERHEARD IN A 'BUS.—"Sir, you are a clumsy fellow—you trod on my foot." "I am extremely sorry—I hope I did not hurt you very much." The soft answer turned away the other's wrath, and even produced an apology. "Oh, no, not very much—you must excuse me. I am a little irritable—fact is, out of sorts, liver, biliousness, and that sort of thing, you know—thoroughly wretched." "My dear sir, of course I excuse you, but why don't you take something?" "Tried everything—no good." "Nonsense—you haven't tried Holloway's Pills, I know—they never fail in cases like yours." "Gad! I never thought of 'em. *By Jove*, I'll try 'em at once. Hi! conductor, stop the 'bus."

MINING IN CORNWALL AND DEVON:

NOTES ON MINING IN THE WEST.

(BY OUR SPECIAL CORRESPONDENT).

THAT dull, depressed condition which has been the only characteristic recently of the mine share market unfortunately continues. There were little indications a few weeks since which pointed to a revival; a feeling had got abroad that prices had touched bottom, and that there was a chance of making money on the rise which was thought to be imminent. The result of that was to place a goodly number of buying orders on the market, and in the execution of these prices were forced up. There has, however, since been a falling-off in the orders, and that recovery in the price of mineral which was anticipated not having come about, things have again fallen very flat all round. Business on the Exchange is practically *nil*. It would be interesting to get a glance over the books of some of the brokers for the last 12 months as compared with (say) 1888. By the time sundry calls have been paid and bad debts wiped off, the balance on the right side of the book must be very small, if it has not been more than extinguished altogether. Bad, however, as things are, they have been worse, and there have been revivals following on severe and prolonged depressions, and history is as likely to repeat itself in connection with Cornish mining as anything else. When the reaction does come there will be money in it, and those who are left behind will be denouncing their own shortsightedness in not picking up stock at the low figures.

THE distress in the mining districts, consequent upon the reduction in the number of hands in most of the mines, and the actual stoppage of others, is most intense, and the hardship which the severe weather of the past few weeks has brought on the mining population can scarcely be realised by those who have not come in contact with it. Every district must have suffered more or less, but at Camborne and Redruth the number of mines in the neighbourhood necessarily implies that the distress must be intensified there. Even at Dolcoath, and the leading mines, there have been substantial reductions, and added to the general distress prevalent as the result of the lack of employment there comes the further burden caused by the untoward incident at Wheal Basset by which nearly 200 men have been out of work for the last fortnight. There are rumours of further reductions in the mines in order to keep the losses within reasonable bounds. In the St. Just district things are also very serious. Levant, fortunately, is doing fairly well under the adverse circumstances, but Botallack, the only other mine in what was at one time a very active mining district, is doomed, and will stop definitely in the course of a month or two at most—in fact, is being kept open now more for the sake of keeping the men in work during the winter months than with any prospect of financial benefit to the shareholders. In the Liskeard district, Phœnix United—the only mine that has lately been at work there—is in course of liquidation, and the distress among miners out of work there is said to be very great. It is most fortunate that in such a crisis there is that little nest-egg of £2000 which was invested in 1879, the balance of the relief fund started then for the benefit of the miners; and this, with the accumulation of interest, forms a substantial sum with which to render assistance now. A meeting of the committee which has the control of this fund has been held, and it has been decided to utilise it. Immediate grants of money have been made to several localities for distribution by the District Councils, and further grants will be made as required. The committee expressed the hope that the money may be applied to the provision of labour rather than the gratuitous distribution of hard cash, and the outcome will doubtless be some much-needed improvements in some of the roads in the district.

THERE is a good deal of anxiety expressed as to the actual condition of things underground at Dolcoath, and this uneasiness has something to do with the drop back in the price of the shares. The run in the shaft appears to be more serious than was at first anticipated, so much so, in fact, that the manager has decided to abandon the attempt to remove the obstruction in the shaft, and to sink a new shaft from the 375, where the obstruction commences to the bottom. This will be sunk on the north part of the lode, where the ground is fairly easy for sinking; 50 fathoms will, however, take a long time to sink, and this determination of course must mean that in the interval they will have one shaft less to draw the stuff through. The meeting will be held in a few weeks now, and the statement of Captain Josiah Thomas as to the effect of this on the immediate returns, is awaited with some interest. It is reported that Captain Tamblyn, whose energy has done much to the development of South Crofty in the last year or two, has transferred his services to Dolcoath.

THE loss at Wheal Agar of £1500 on three months is more than was expected. There was some fear expressed here lest a hasty determination would be come to to close the mine; but although Captain Hambly's suggestion to let the water in the bottom levels appears to have been adopted, there remains life in the concern, and there is a prospect of some discovery being made in the 245. Wheal Agar is regarded in the county as a valuable sett, and the result of the present company deciding to close would, doubtless, be that East Pool adventurers would be delighted with the prospect of obtaining it.

THE news has been received with very great regret in the western part of the county of the death, at Kimberley, of Captain James Newton, of St. Just, who was at one time chief underground agent at Levant, and was regarded as an excellent miner. He had intended coming to England for a short holiday in a few weeks.

THE dispute between South Frances and Wheal Basset as to the pumping of water has been amicably settled, South Frances agreeing to keep Thomas's engine working 8½ strokes a minute, Wheal Basset to pay one-half the cost of any breakage which may result. Captain Oats is prepared to agree, as the largest shareholder in Wheal Basset, to some scheme for the pumping of water in both mines, and this will probably come on for discussion at an adjourned meeting of the committee, when Mr. Oats returns.

BORON STEEL.—M. Henri Moisson, who may be regarded as the isolator of boron, as well as of fluorine, seeing that what was formerly considered to be boron has been shown by him to be a sodium boride, has been manufacturing a steel in which boron is substituted for its analogue carbon. He finds that boron, like carbon, confers upon iron the property of taking a temper, but the boron temper is of a special character inasmuch as it corresponds to an increase of the breaking strain without any appreciable augmentation of hardness. Generally, ferro-boron, so to describe the alloy of iron and boron, behaves like mild steel.

THE FEDERATED INSTITUTE OF MINING ENGINEERS.

MEETING IN BIRMINGHAM.

THE 17th general meeting of the members of the above Institution was held on Tuesday, in the Examination Hall of the Mason College, Birmingham, under the presidency of Mr. W. N. ATKINSON.

There was a large attendance of members, amongst those present being Messrs. T. F. Brown (Cardiff), M. H. Mills, W. F. Howard, W. Spencer, and G. E. Coke (Chesterfield), J. Barrowman and G. A. Mitchell (Glasgow), J. Head (London), E. Bainbridge (Sheffield), J. Longbotham (Barnsley), E. B. Wain, J. R. Haines, and J. Strick (Stoke), A. Sopwith (Cannock), D. Jones (Shropshire), F. G. Meacham (Hamstead), L. B. Wells (Manchester), E. D. Marten (Wolverhampton). L. F. Vernon Harcourt (London), J. S. Haldane (Oxford), W. B. Collis (Stourbridge), W. C. Blackett (Durham), G. Binns (Burton), G. Lewis (Derby), J. Hughes and H. W. Hughes (Dudley), A. H. Stokes (Inspector of Mines, Derby) W. B. Scott (Inspector of Mines, Great Barr), J. C. Robinson (Brereton), Alexander Smith, Professor Lapworth, Beriah Shepherd, and Councillor S. Lloyd (Birmingham), M. W. Brown (secretary, Newcastle-on-Tyne), &c.

The Audley Colliery Disaster.

At the commencement of the proceedings, Mr. E. BAINBRIDGE (Sheffield) proposed, "That this meeting desires to express its deep sympathy with the sufferers by the disastrous accident at the Audley Colliery."

Mr. F. BROWN (Cardiff) seconded the resolution, which was carried unanimously.

The Hamstead Colliery.

A paper by Mr. F. G. MEACHAM on "The Search for Coal Beyond the Eastern Boundary Fault of the South Staffordshire Coal Field, with Special Reference to the Hamstead Colliery," was read. The writer described the search made for coal, and said that in spite of repeated and unsuccessful trials the opinion gained ground that a new coal field lay under the red rocks in the district of Wednesbury and Sandwell. Accordingly, in 1870, a prospectus proposing a trial sinking for coal to be made near West Bromwich was issued, with the result that Sandwell Park Colliery was sunk, and then the Hamstead Colliery Company was formed, their estate comprising 500 acres of surface and mines; while the various additions made since, had increased the total area to 1000 acres of freehold and leasehold estates. The geological aspect of the district was alluded to, the mode of working the thick coal seam explained, and then the writer gave a good description of spontaneous combustion. He also supplied some interesting information as to the effects of pressure of overlying strata, and, in conclusion, dealt with the temperature of the mine and strata.

A brief discussion followed, in which Messrs. SOPWITH, JONES, BROWN, and Professor LAPWORTH took part, the last named dealing particularly with the geological portion of the paper.

Remarks on the Banket Formation at Johannesburg.

This paper, which was taken as read, was contributed by Mr. A. R. Sawyer.

The banket formation, the author remarked, is restricted to the Transvaal Free State, and Zululand. It covers a very large area, especially in the southern part of the Transvaal, and it was not by any means restricted to the Witwatersrand gold field. This formation, though approaching to basin shape in some localities, had not so far been conclusively proved to form a real basin on the Witwatersrand in depth. The curvature of the beds in the Witwatersrand gold fields, where these were steep at the outcrops, turned to a flatter angle in depth. This curvature, which was frequently extraordinarily regular, resembling a parabolic curve, was not sufficient evidence that they would resume a horizontal position farther south. Where the beds dip at an angle of 30° and under, they did not so far assume a flatter dip in depth. Nor was the fact that these beds dipped to the north in some parts of the Heidelberg district proof positive of an uninterrupted basin theory.

The geological aspect of the question resolves itself into three parts: (1) The manner in which the group of rocks known as the banket formation was formed; (2) the manner in which it had become broken up, tilted, and readjusted; and (3) its relation to other rock formations in South Africa, and its relative age. The chemical aspect had to deal with the manner in which the gold was deposited in the matrix of some of the banket beds, either at the time of their formation, or, as he believed, subsequently. With regard to the manner in which the banket formation was formed, there was no reason for supposing that the sandstones, quartzites, shales, and slates of which it was composed, were formed differently from rocks of a similar nature elsewhere, and that they were sea-borne detritus of rocks of former ages. Theories had been advanced to explain the presence of such continuous and persistent conglomerate beds as occurred in the formation. The writer has previously stated that the "thin beds of conglomerate were probably shingle-banks or gravel-beaches as we now see them. The manner in which thick beds of conglomerate, like those occurring in the Old Red Sandstone in Scotland, were formed, is not so easy of explanation. Conglomerate beds are, as a rule, very variable in thickness; they also run in and out pretty freely. The constancy, therefore, of the bankets over such a great distance is remarkable. The length of their extension justly suggests a continuation downwards for a considerable distance." In thus speaking of the constancy of these banket beds the author had the south reef and its leaders more especially in view, which may be said to be continuous over a considerable area.

The other reefs are more lenticular, and not very different from ordinary conglomerate beds. It is, in the writer's opinion, premature to speak of any of the theories which have so far been advanced with any degree of certainty. As no satisfactory theory has yet been promulgated to account for the occurrence of the well-known Dwyka conglomerate which occurs in the Cape Colony, Natal, and Zululand, and some time must yet elapse—and we must be in possession of many more systematically collected facts before any really tangible theory can be advanced which will be generally acceptable to account for their formation. The manner in which the banket formation has been broken up, tilted, and readjusted has, to some extent, already been explained. Eruptions of basic igneous rocks occurred previous to, concurrently with, and subsequently to the disturbance produced by a lateral thrust. The rocks forming the banket formation have not always been in the state of consistency in which they are now found. Heat and moisture combined, before they were raised to their present horizon, to form them into a pasty mass. The intrusions of igneous rocks subjected them to high temperature, and the tilting, collapse, and readjustment also developed heat with them.

A good example of one dyke formed, when the formation was still in a horizontal position, thrown out by one which had been intruded, subsequently occurs at the Ferreira Mine. The dykes and bosses occurring in the undisturbed coal formation which unconformably overlies the banket formation had assumed its present position. Diabase, an altered dolerite, predominates as the substance of these dykes. In the Heidelburg district, more especially the well-known amygdaloidal trap, a former lava in which the amygdules contain quartz, also occurs. The quartz contained in these amygdules bears some resemblance to the pebbles in some of the banket beds. Hornblende and chlorite schists, formed by alterations of these igneous rocks, also occur, apparently interstratified with the sedimentary beds.

Although dykes on the Witwatersrand occur in nearly all directions, the more prominent ones appeared, as far as they had been observed, to run either nearly north and south or east and west. The writer did not know to what extent the dykes had been assayed for gold, but many of them contained pyrites. The so-called spar veins, which were quartz veins occurring in the formation, also contained pyrites. As regards the age of the banket formation and its chronological order, it had been demonstrated that it was younger than the well-known crystalline schists of the country, and older than the so-called "Elephant Rock," a dolomitic lime-stone pretty widely distributed in the Transvaal, and the coal formation overlying it. The writer pointed out in his report to the Cape Government that the sandstones, quartzites, and talcose slates of the Zwartberg Mountains greatly resemble those of the Witwatersrand, and that this similarity was increased by the presence in the Zwartberg sandstones of white, pale red, and black quartz pebbles, some of which were very brittle. These pebbles lie mostly scattered in indefinite lines, but he had found them more concentrated in the shape of thin banket beads.

With regard to the chemical aspect of the question, the author does not regard the term "pseudomorphic" (a term used by a recent writer on the subject) as applied to the matrix of the conglomerate as a happy one. A "pseudomorph" is a mineral which has replaced another, and has assumed the external form of the mineral so replaced. The writer is not aware that any mineral now found in the matrix of the banket assumes the external form of one which it has replaced. That there has been a replacement of minerals by others, in the matrix of the banket, has never been doubted. In the author's paper, read in 1889, he stated as follows:—"Rocks are porous, conglomerates are more porous than the encasing rocks, hence that would be the paths chosen by the ascending hot waters or vapours containing gold, and it would be deposited in the matrix of the conglomerates, and to some extent in the pores of the encasing rocks as well." That the conglomerate beds were more porous, and would afford a freer road to ascending solution, will be evident from the fact that even in cyanide vats solutions pass more freely through the coarse material. The fact that frequently the larger the pebbles the richer the reef will also be thus explained.

The writer is informed by Mr. Crosse (assayer to the Standard Bank at Johannesburg) that the proportion between gold and silver, commonly called the fineness, varies greatly at different parts of the field, but that it has not yet been proved that it varies in the same locality in depth. That fact, taken in conjunction with the fact that many of the large and important dykes run north and south, points to the probability that the solutions carrying the gold and silver rose from below upwards, so that the rocks from which the solutions derived their minerals may not have yet been disclosed in depth. This statement confirms the writer's view, expressed in 1889, that the solutions ascended from which the gold was deposited. The extreme relative proportions of gold and silver were respectively 93 per cent. of gold to 7 per cent. of silver, and 83 per cent. of gold to 17 per cent. of silver. It was stated as an objection to the view that the gold was introduced subsequently to the formation of the banket beds, that it occurred very regularly in certain beds, whereas others equally favourably situated in regard to the source from which the solutions were supposed to have originated, were barren. It is not easy to account for the erratic courses of solutions, especially if, as in Mr. Crosse's experiments, they were induced by an electric current. A theory has been advanced in which the gold was described as having been precipitated from a solution at the time of the formation of the banket beds. It was supposed that drift-wood collected in some way by the pebbles precipitated the gold around them.

An examination of the assay plans at the various mines, with an examination of the reefs, established, he believed, the following facts, which agreed better with the theory that the gold was deposited after the formation of the banket beds than at the time of their formation:—

1. That the gold is very evenly distributed in the south reef and its leaders, in the vicinity of Johannesburg.
2. That although the gold is pretty evenly distributed in the other reefs, yet certain richer patches or shoots occur, as in ordinary quartz veins, and some poorer patches which are left in.
3. That exceptionally rich pockets are occasionally found in which the gold occurs along with pyrites.
4. That the richer patches or shoots are not necessarily in close proximity to igneous dykes, so far as these are at present disclosed, but, on the contrary, that the reefs are, in some instances, poorer nearer dykes.
5. That whenever, as sometimes occurs, the reef is richer than the average on one side of a dyke, it is poorer on the other side.
6. That frequently when the reefs are thinnest they are richest. Leaders, being thin, are usually much richer than the reefs near which they lie.
7. In the south reef the larger the pebbles, as a rule, the richer the reefs. This applies to some extent also to other reefs, but there are exceptional cases in which the richer portions of the reef have smaller pebbles. Barren beds with large pebbles also occur in the banket formation.
8. At some mines the richer shoots have, like the prevailing faults, a north-west or south-east trend.

Sampling.

This paper, which was also taken as read, was contributed by Mr. T. CLARKSON. The object of the author was simply to impress upon mining engineers the importance of careful and skilful sampling, a matter which, he asserted, has not hitherto received the attention it merits. This work is frequently done in a most perfunctory and slip-shod manner, although so much that is of value depends upon the result. Surely sampling is co-equal in importance with chemical analysis, being, in fact, the first practical step in that analytical operation. The practical utility and value of chemical analysis is generally appreciated, and it is, therefore, accorded a high and respected position; but before a chemist can make an analysis he needs a small quantity of the substance from the large bulk whose value it is the purpose and object of his analysis to determine. The work of selecting this sample is often entrusted to an unskilled labourer, or sometimes it is left in the hands of a skilled but interested party. After the sample has been so taken, the careful work of the analyst, who patiently gathers up all the minute fragments and weighs them to 0·001 grain, can only be compared for stupidity to locking a stable-door after the horse is stolen. Everyone who has considered the matter knows that to select a sample, which in all truth represents and embodies all the qualities and elements in their fair and correct proportions as they exist in the bulk of material, is a matter which demands extreme care, and even then the result has not always been quite satisfactory.

If the result of the analysis is to be entitled to respect, it should be recognised that not only must the latter part of the analytical operation be carefully conducted, but the beginning, which is the very foundation, must receive equal, if not greater, attention. If materials were uniform in constitution, sampling would then be one of the simplest things in the world, but we know that in a heap of ore or coal the first piece that is picked up may be practically worthless, and the next may be of extra good quality, and so on; it also generally happens that the fine stuff—that is, the dust—is very different in composition to the lumps. For example, in many silver ores the richest parts are so brittle and friable that in the process of handling they are crushed and broken to a greater extent than the harder rocky matrix, consequently the fine dust in such cases contains the best and most valuable portions of the ore. Consequently, for all minerals, it is necessary to obtain in the sample the same proportion of dust and finer material as in the whole bulk. The writer is of opinion that generally the only way to correctly sample a large bulk of material is to deal with the whole bulk, and not, as at present, with only a few per cent. of it. To deal with the whole bulk is not practicable by hand-labour, therefore it is necessary to employ machinery. The employment of machinery for sampling has the great advantage of the work being done impartially, the results are obtained quicker, and, most important of all, the utmost possible accuracy is secured. It is not the purpose of this paper to recommend the employment of any particular sampling machine, suffice to say that efficient machines are now available. Several kinds of sampling machines are in use in America, but the one shown by the model exhibited is, the writer believes, the only one in use in this country. The object of this little paper is to induce the members to consider a subject of great importance, and in which any improvement is obviously to the ultimate advantage of all.

THE DINNER.

In the evening the members dined together at the Grand Hotel, under the presidency of Mr. H. C. PEAKE, Chairman of the South Staffordshire Institute of Mining Engineers. There was a large attendance, the company including several visitors.

The CHAIRMAN proposed the loyal toasts, and Mr. E. BAINBRIDGE submitted "The Trade of Birmingham, South Staffordshire, and East Worcestershire," remarking that that day they had entered on a most important and serious consideration of the canal traffic. They had heard enough to cause them to think much more might be done in regard to carriage by water.

Mr. C. H. TREGLOWEN responded.

Mr. R. CHAMBERLAIN proposed "The Federated Institution of Mining Engineers," saying that those who had to do with mining engineers knew how difficult their position was. At a moment's notice, and in times of great difficulty, the mining engineer, with very slender appliances and a small amount of labour, a great deal of which was probably unskilled, had by his own strength of will and force of character often to carry out those operations which might be necessary to save men from untimely death, or carry on a colliery, the stoppage of which would entail loss of untold money to the owners and wages to the workpeople. As a coal-owner, he was glad to be able to testify to the great work the mining engineers had to perform, and to say that they did not get that recognition for their work which, although it might appear to be little work, was great in its way, and showed genius not very far inferior to that which was sometimes recognised in a far more notable manner. They owed to the mining engineer the knowledge of mines of which our fathers were wholly ignorant, or which was wholly inaccessible to them. The Federated Institutes were doing good work, for they enabled mining engineers to meet together and discuss subjects in which all were interested, thereby imparting to each other a considerable amount of knowledge. He congratulated the institution on its success. Its membership had risen from about 1200 in 1889 to nearly 2100 last year, and he trusted its success would be continued in the future (Applause.)

Mr. W. N. ATKINSON replied.

The other toasts were "The South Staffordshire and East Worcestershire Institute of Mining Engineers," "Her Majesty's Inspectors of Mines," and "The Chairman."

THE INSTITUTION OF MINING AND METALLURGY.—The fifth ordinary meeting of the fourth session of this Institution will be held next Wednesday, February 20, in the Lecture Theatre of the Geological Museum, Jermyn-street, S.W., at eight o'clock, when the following papers will be read:—"Improvements in Gold Extraction," by Mr. H. Livingstone Sulman (Member). "The Covadonga Manganese District and its Mines," by Mr. J. A. Jones (Member). "The Manganese Deposits of Huelva," by Mr. Frank Johnson (Member). "Notes on the Espiritu Santo Mine at a Cana," by Mr. Ernest R. Woakes (Member).

TIN DISCOVERY ON THE COLORADO RIVER.—A discovery of tin is reported on the Colorado river, 125 miles from Yuma. The ore is pronounced a greyish black colour, resembling galena, a sample of which was tested by the Phœnix assayer, who claimed it to contain about 10 to 40 per cent. tin. The ore lies in a bed apparently of several hundred acres, is mixed with red and yellow oxides, and is covered with layers of quartz and talc.

Reefs fully proved, and yielding quartz averaging 5½ ounces to the ton (see Account Sales of the Bank of New South Wales).

Modern machinery expected to extract 10 ounces per ton (see Professor Campbell's report).

THE TAMWORTH GOLD MINING COMPANY (Limited), Nundle Gold Fields, New South Wales, Incorporated under the Companies Acts, 1862 to 1893. Capital £85,000, in 85,000 Shares of £1 each.—ISSUE of 55,000 SHARES of £1 each, payable 2s. 6d. on Application, 2s. 6d. on Allotment, and the balance in calls of not more than 5s. each, and at intervals of not less than two months, as and when required.

DIRECTORS.

The Right Hon. Earl of DONOUGHMORE, K.C.M.G., Chairman.
H. G. M. Conybeare, Esq. (Director of the Balkis-Eersteling Mining Company, Limited).
T. B. Forwood, Esq., Hawkshead House, Hatfield (Director of the Tilbury Lighterage Company, Limited).
Archibald Fairlie, Esq., C.E., 16, Grafton Square, Clapham, S.W.
George W. Smiley, Esq. (Chairman of the Rice-Hamilton Exploration Syndicate).

ADVISORY LOCAL COMMITTEE.

Sir Henry Parkes, K.C.M.G. (late Premier of New South Wales).
C. J. Britten, Esq. (Mayor of Tamworth).
Eustace H. L. Pratt, Esq., M.D. (J.P., Tamworth).

BANKERS.

In Great Britain—City Bank (Limited), Threadneedle Street, and Branches.
In Australia—Bank of New South Wales.

SOLICITORS.—Messrs. Ashurst, Morris, Crisp, and Co., 17, Throgmorton Avenue, E.C.

BROKER.—Alfred J. Benjumin, Esq., 1, Austin Friars, E.C., and Stock Exchange.

AUDITORS.—Messrs. Ford, Rhodes, and Ford, College Hill, E.C.

SECRETARY (*pro tem.*) and Offices.—A. G. Trew, Esq., 334—6, Dashwood House, 9, New Broad Street, E.C.

ABRIDGED PROSPECTUS.

This Company has been formed to purchase, as a going concern, and thoroughly develope the "Hanging Rock Gold Mine," known also as "Isaacsohn's and Thompson's Mine." The property comprises 16 acres, situated about three miles from Nundle, New South Wales, and 40 miles from Tamworth, one of the most important towns on the Main Northern Line of Railway, connecting Sydney with Brisbane.

The mine, as appears from Professor Campbell's report, has been worked for several years in a primitive manner by the owners, both working men, and the ore has had to be carted about 10 miles to an old crushing battery to be treated; but notwithstanding these disadvantages the gold recovered has averaged about 5¼ ounces to the ton of ore, 388 tons having yielded 2102 ounces of gold, which, sold at the rate £3 17s. 10½d. per ounce, realised £8148.

The foregoing figures are taken from the account sales of the Bank of New South Wales, and Mr. Isaacsohn, one of the former owners of the mines, certifies that the 2102 ounces of gold were obtained from 388 tons of quartz. The account sales and certificate can be inspected at the Offices of the Company.

A few months ago the managing partner, Mr. Thompson, one of the two owners, died suddenly. Owing entirely to the difficulty of carrying on the mine to the satisfaction of his representatives, and with the object of providing working capital for the proper development of the property, it has been sold to this Company.

The title is a Crown lease direct from the Government.

There is an ample supply of water power at a sufficient elevation, easily available for driving a battery for crushing purposes, and there is an abundance of timber on the property, so that mining operations can be carried on at a minimum of expense.

Attention is called to the Reports of Professor Campbell, M.A., F.G.S., of St. Nicholas' College, Sydney, and of Mr. Thomas Birrett, M.E., both of whom have personally examined the mine, and which Reports accompany the Prospectus.

The directors have not ordered new assays of the ore, as the Account Sales referred to herein give the actual yield. Samples of the quartz can be seen at the Offices of the Company. It will be observed that, whilst the gold that has been obtained from this property has actually given an average of over 5 ounces of gold to the ton of quartz, Professor Campbell, in his report, speaks of 8 ounces per ton as being what he judges should be yielded by ordinary battery treatment, and about 10 ounces by the employment of the latest modern appliances.

It is confidently anticipated that when a modern plant, with only 10 stamp heads, capable of treating 12 tons a day, has been erected, the mine under proper management should yield the following returns:—

12 tons of ore a day, at 5 ounces of Gold to the ton at £3 17s. 10½d. per ounce	£234
With the new mill to be erected at the mine, it is with confidence expected that the gross expenses will not pass a maximum of £2 per ton, say per day	24
	£210
At 300 working days in the year	300
Showing a net annual profit of	£63,000

The following contracts have been entered into. (See full Prospectus):—

These arrangements will leave £10,000 of the Company's capital available for the provision of working capital, out of which about £4000 may have to be expended on the purchase and erection of a ten-stamp mill and other machinery. As the mine is a going concern, to be worked by water-power, the materials thus provided for will enable mining operations to be carried on vigorously, and the balance will leave an ample provision for the development of the property, and the general purposes of the Company.

Prospectuses and Forms of Application may be obtained from the Bankers, Solicitors, Brokers, or at the Offices of the Company.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

The Coetzeestroom Estate and Gold Mining Company.

The following circular has been issued to the shareholders of this company, signed by the secretary:—"In reply to enquiries by many recent purchasers of the shares of this company, I have been asked to give some information of its past and present position. The original Coetzeestroom Estate and Gold Mining Company (Limited) was registered in December, 1888, to purchase and develop 12,312 acres of freehold mineral land in the Transvaal, situated upon the Godwan river, and adjoining the estate now known as the Barrett Gold Mining Company (Limited). The capital issued was £140,000, in 140,000 shares of £1 each. The expenditure approximately was:—Cash on purchase, £10,454; cash on machinery and buildings, £10,639; cash on general expenditure, £22,650; £43,743; of which £8477 was realised by the sale of gold. With an estate of such magnitude, and the difficulties at that time of transporting machinery and stores 400 miles, it will be seen that the capital was wholly inadequate to work and develop too. Then the discovery of banket deposits after the estate was purchased diverted the original plan to work the quartz reefs, and they remain to-day practically unprospected, and about 18 miles of land upon which many reefs were reported to exist by the original surveyors are almost unknown. The present reconstructed company was formed in June, 1892, with 140,000 shares of 5s.—3s. being credited and 2s. per share paid up. The reduction of capital was effected solely to meet the wishes of the shareholders, in consequence of some uncertainty in the law by a decision of the House of Lords in the 'Ooregum' case (given a day or two before the extraordinary general meeting of the company). It will be manifest to all that, with such an expenditure and results, with the land increasing in value by the construction of the Delagoa Bay Railway, there could be and is no reason for the property standing at a fourth of its original value. The yield of gold to the present company has been about £6400. In the report issued in November last the directors state:—'The present position of the company is that we have about 20 square miles of freehold property (practically not prospected) now served by the recently constructed Delagoa Bay Railway.' (A station has been opened about 1½ mile from the northern boundary.) 'There are many reefs on it, and enormous deposits of conglomerates. The Banket reef on the east side of Button's Creek for about 2000 yards has been worked, also a few hundred tons have been carted to the mill from Thomas' and Sunday reefs, and some development carried out, yielding about £15,000 worth of gold.' 'Upon the western side of Button's Creek there is a deposit of banket corresponding to that on the eastern side, upon which Mr. Davey, a former manager, reported well, and desired to connect with the mill at an estimated cost of £400. A cyanide plant, equal to treating 1500 tons per month, has been erected, and is so situated that it can be worked on very economical lines, and the original 20 stamp battery and Wheeler pans are in good working order.' Instructions have been given to confine operations for the present to prospecting generally, and particularly the western side and the reefs in proximity to the mill, and the directors hope for information shortly to warrant them in continuing crushing. There is room upon the estate for several companies, and as soon as possible attention will be given to the many known reefs, some of which are described in the original report and prospectus. Maps of the estate are in the office, and I shall, at any time, be pleased to show them to shareholders. In conclusion, I may remark that the company has in hand, and in securities, sufficient money to carry out the above instructions."

Carrington Gold Mining Company.

The following circular has been issued to the shareholders:—"The prospects of your mine during the past week having suddenly improved, the directors deem it right to place before every shareholder the exact position of affairs, so that no one may suffer from want of knowledge. About a fortnight ago rumours reached London by mail that a split had been discovered in the reef of the adjoining Victoria Mine. It was also stated that a trial crushing was being made of the lower part of the split, but no result was given. A belief, however, was expressed that the Carrington had been working the Caledonia instead of the Victoria reef. If this last statement be true, the Carrington will have four reefs on its property:—The first cut at 114 feet in the vertical shaft (which was thought to be the Caledonia, and left untouched); another cut at 280 feet (which was thought to be the Victoria, but now may be the Caledonia reef, in which the underlie has been made); and the split reef below these two. Or it may be that the reef on which the underlie has been driven is the upper part of the Victoria split, and the lower or richer part of the reef has to be found by sinking the vertical shaft a little further; it is now down 380 feet. Whatever may be the exact facts (which will be disclosed in due course by mail advices) it is evident that the lower part of the Victoria reef has proved a rich discovery, as the shares of the Victoria Company have advanced in price during the past week very rapidly. It is well to remember, too, that the crushings of the Victoria, about two years ago, averaged about 5 ounces per ton (probably upon the reef before the split was reached). These rumours led your directors on Tuesday last to cable to the manager at Charters Towers, Mr. Alan B. Bright, to know if the improvements in the Victoria reef benefited the Carrington. To this the manager has sent the following reply:—'Owing to the improvements in the Victoria Mine, I have increased the lease of your property from 12 to 25 acres. It would be advisable to sink shaft a little further.' This your directors consider very satisfactory intelligence, as Mr. Bright, being known as one of the most careful and far-seeing managers on the field, would not have taken up this additional area unless the improvement in the Victoria reef was very marked. With regard to the No. 1 east level, now being driven from the underlie, the manager says in his mail advices that the quality of the ore has improved in appearance, and that Mr. Holliman, (the manager of the Victoria), and also his mine manager, think that the Carrington Company are almost certain to get a shoot of gold in that drive; but in the cable just received he says:—'There is no change worth reporting in the level, but I have made a fresh contract for driving 50 feet.' This shows that the manager expects to get the shoot of gold within that distance. From the original report on this property it would appear that there are further reefs below the Victoria, and your directors, in the face of the latest development look forward with confidence to the future of the mine, which now seems practically assured."

The Nine Reefs Gold Mining Company.

The following circular has been sent to the shareholders:—"At the ordinary general meeting of the company, held in December last, the position and prospects of the mine were laid before the shareholders, and fully explained. It was stated that the capital remaining at the disposal of the company was insufficient for the full development of the property, and that further money would be required for that purpose. The Chairman further indicated that the directors would prepare a scheme for raising the requisite capital, and shortly submit it to the shareholders for their consideration. Various plans have been considered, and the board have arrived at the conclusion that the best and most economical mode for obtaining the fresh capital required would be by the reconstruction of the company. An extraordinary general meeting will, therefore, be held on the 21st inst. to consider and, if thought fit, to pass the necessary resolutions for that purpose. The operations at the mine have been regularly carried on since the recent general meeting. It was then stated that stamping had just been commenced on the ore opened up at Vyvyan's shaft, and the results so far have been as follows:—December, 200 tons stamped produced 111 ounces of gold; January, 260 tons stamped produced 147 ounces of gold. These returns the directors regard as satisfactory. With the new capital proposed to be raised, the board intend not only to continue the sinking of south shaft, with the object of developing the Champion lode, but to deepen one or more of the shafts on the Oriental lode, on which satisfactory results are being obtained by the Gold Fields Company further south. The lode also being worked upon by that company in the West Balaghat Block, and which is opening up well, runs through the Nine Reefs property, and will receive the attention of this company. The capital provided for by this scheme amounts to £31,250, which is considered ample for the purposes of the company."

Waihi Gold Mining Company (Limited).

The following is a circular which has been issued to the shareholders:—"The telegraphic information given to shareholders at the lately held extraordinary general meeting of January 9 last, practically superseded the recent mail advices, which only brought dates to December 29. Since the meeting was held the 10,000 new shares have been placed at £4 premium, with the exception of a few which were unapplied for, and which have been placed at £5 premium, and the development fund is thus assured. Active steps have been taken to press forward the exploration and development works at the mine. The colonial board and the company's officials have recommended, and the board have authorised, the following new works. 1. At the adit level, drives upon the Martha and the Welcome lodes are being pushed forward, and will be continued westward in the lodes for 450 yards in each case. 2. A prospecting drive is being made through the Martha Hill. It will run in a southerly direction and so crosscut any lodes which may exist in the large area of the company's ground between the Welcome lode and the southern boundary. From outcroppings of quartz on the surface, it is believed that lodes do exist in this part of the ground, running parallel with the lodes now being worked. 3. A new shaft is to be sunk 600 feet to the W.S.W. of the existing shaft, to be equipped with efficient and powerful pumping and winding gear. The shaft is to be connected by a drive with the adit level so as to discharge the mine water by that level. 4. The water rights referred to at the meeting have been transferred to the company, and the company in addition, has acquired from the Government (by direct application) other water rights. The water rights, now the company's property, give altogether a very large power quite sufficient for all purposes. The necessary surveys and working plans are now being made, upon completion of which the cost of the works will be ascertained, and the various questions connected with the motive power for the future will be determined. The bullion return for the 38 days ending February 9, was £11,400 from 3050 tons of ore crushed. The directors have declared an interim dividend of 2s. per share, payable on March 12 next, free of income-tax; warrants will be posted on March 11. The transfer-books will be closed from March 4 to 11 inclusive."

West Australian Exploring and Finance Company.

The following circular has been issued to the shareholders:—"It gives me pleasure to inform you that our issue of the Mainland Consols (Limited) has been very largely over-subscribed, and that the shares already command a substantial premium. In reply to numerous enquiries as to which of the West Australian mining companies now before the public have been promoted or issued by the West Australian Exploring and Finance Corporation (Limited), I may say that, although this company owns a number of valuable properties in Western Australia, the only company thus far incorporated and issued by us is the Mainland Consols (Limited). For your guidance hereafter I may state that in every instance any issue made by us will bear on the prospectus the statement that the West Australian Exploring and Finance Corporation (Limited) invite subscriptions to the issue. The next company to which we shall invite subscriptions will be the Golden Crown (Limited), incorporated to acquire the celebrated Golden Crown and other leases, pronounced by many to be the richest property yet discovered in the White Feather district, Western Australia. Several hundredweights of stone from the Golden Crown, literally studded with gold, is now on view at the offices of this company. We expect to issue the Golden Crown (Limited) during the present month. Although the issue (like the Mainland Consols, Limited) will probably be over-subscribed, priority of allotment to shareholders in the West Australian Exploring and Finance Corporation (Limited) will be stipulated for.—Whitaker Wright, managing director."

Rosario Nitrate Company.

The report of the directors for the 12 months ended September 30 last, states that the profit and loss account shows a gross profit on trading account of £169,486, of which interest on debentures to September 30, 1894, general charges and loss in exchange have absorbed £39,154, leaving the sum of £130,337 to be carried to the balance-sheet. After adding thereto, on the one hand, the balance of the last account, and, on the other, deducting the debenture redemption of April 1, 1894, there remains a net profit for the year of £117,133. Out of this there has been paid, on August 15 last, an interim dividend of 5 per cent., absorbing £30,000, and there has to be retained one-half of the debenture redemption due April 1, 1895—viz., £21,210. The directors now recommend the declaration of a further dividend of 7½ per cent., free of income-tax (making 12½ per cent. for the year), absorbing £45,000; the balance thus remaining—viz., £20,923—being carried forward. During the year the company had invested in the purchase of further nitrate grounds a sum of about £40,000. The extent of the property is about 97 estacas; the grounds adjoin the original Rosario grounds, and it is estimated that they will yield not less than 5,000,000 quintals of nitrate. Since the period covered by the accounts, the board, on October 15, acquired, at the Government auction, the grounds known as Puntilla de Huara, containing 72½ estacas, and adjoining half the grounds above-mentioned, and the original Rosario grounds. These grounds are estimated to yield at least 7,000,000 quintals, although the Government estimate of their contents is considerably higher. The capital expenditure required to meet the purchase price (£168,000), as well as the cost of a new oficina, which the board has decided to erect on these grounds, will be provided for by a special issue of debentures to the extent of £200,000. In addition to the above, the board has purchased the partially-worked grounds of Solferino, consisting of about 110 estacas. These grounds, from their position around Argentina, are expected to be of considerable value to the company. The price paid for them is £5000, which will be provided for by the sale of a corresponding amount of debentures of 1893, held in reserve.

— The report of the directors of the NEW SHARLSTON COLLIERIES for the year 1894 states that prices have ruled very low during the year, and, while the output remains nominal, the gross profit for the year amounts to £16,771, and, adding the undivided profit from 1893, makes a total of £18,016, out of which the directors propose to write off as depreciation of colliery property £5081; to pay a dividend of 10s. per share, which, with the interim dividend paid in August last, makes 5 per cent. for the year; and to carry forward £1386.

— The CHAMPION REEF GOLD MINING COMPANY OF INDIA (LIMITED) has sold the gold produced in December for £21,444 19s. 3d.

THE RAND OUTPUT FOR JANUARY.

THE total output from the Rand district during the past month amounts to 177,463 ounces, and shows a decrease of 4641 ounces as compared with the previous month's total, and an increase of 27,649 ounces as compared with the corresponding month of last year. The following table gives the monthly returns since beginning of 1890:—

	1890. Ozs	1891. Ozs.	1892. Ozs.	1893. Ozs.	1894. Ozs.
January ...	33,030	53,025	84,560	108,374	149,814
February ..	36,886	50,079	86,649	93,252	151,870
March	37,680	52,949	93,244	111,474	165,372
April	38,799	56,372	95,562	112,053	168,745
May.....	38,884	54,673	89,436	116,911	169,773
June	37,412	55,864	103,252	122,907	168,162
July	39,452	54,924	101,280	126,169	167,953
August ...	42,861	59,070	102,322	136,069	174,977
September	45,467	65,602	107,852	129,585	176,707
October ...	45,251	72,793	112,167	136,682	173,378
November	46,795	73,394	106,795	138,640	175,304
December	50,352	80,313	117,749	146,357	182,104
Total ...	494,869	729,238	1,210,868	1,478,473	2,024,159

The following are the January returns, so far received, from the South African mines, and the results for the previous five months:—

	Aug. Ozs.	Sept. Ozs.	Oct. Ozs.	Nov. Ozs.	Dec. Ozs.	Jan. Ozs.
Afrikander.....	645	707	660	602	600	621
Aurora	491	301	386	295	—	*
Barrett	252	347	403	581	606	*
Birthday.....	192	250	281	329	*	*
Buffelsdoorn	4,338	4,620	4,630	5,350	5,174	4,800
Champ d'Or	4,415	4,216	4,050	4,041	3,943	4,250
Champ d'Or Deep.....	—	—	—	1,201	1,415	—
City and Suburban	8,569	9,533	8,399	10,262	10,484	10,219
Crown Reef	10,735	10,727	11,040	10,853	10,443	10,260
Durban-Roodepoort ...	5,135	4,434	5,010	4,792	4,948	5,346
Eastleigh, ...	750	954	1,995	1,963	1,936	2,088
Ferreira	6,255	6,653	6,602	7,088	7 299	7,219
Forbes Reef	280	257	254	233	159	116
Geldenhuis Estate	6,528	7,843	6,301	6,532	6,433	5,966
Geldenhuis Main Reef...	1,687	1,704	1,775	1,670	1,718	1,812
George and May	1,325	1,230	1,006	439	274	—
George Goch	3,095	3,163	3,126	2,310	3,053	3,510
Ginsberg.....	541	565	481	493	618	969
Glencairn	3,510	4,261	4,580	5,057	4,584	4,413
Gold Fields of Mashonaland	110	128	—	—	—	288
Graskop	—	—	—	—	48	51
Henry Nourse	2,137	2,378	2,557	2,421	2,535	2,257
Johannesburg Pioneer ...	997	936	947	895	958	*
Jubilee	2,327	2,192	2,374	2,261	2,079	2,095
Jumpers	4,119	4,502	4,388	4,325	4,205	4,361
Kleinfontein	2,405	2,333	2,401	2,447	2,552	2,712
Langlaagte Estate	11,353	12,665	13,103	11,882	11,731	10,801
Langlaagte Block B.....	3.271	2,792	3,799	3,393	3,456	3,150
Langlaagte Royal.....	5,005	4.554	4,103	3,629	3,191	*
Lisbon-Berlyn	710	626	425	598	295	*
May Consolidated.....	2,100	2,105	2,117	2,200	2,568	3,584
Metropolitan	1,178	1,207	1,289	2,180	2,175	1,930
Meyer and Charlton.....	3,069	2,859	2,929	2,831	2,431	2,427
New Chimes	2,453	2,511	2,512	2,561	2,637	2,657
New Clewer Estate	2,048	1,844	2,248	2,310	2,175	1,773
New Heriot	4,203	4,218	4,233	4,583	5,494	*
New Primrose	7,325	7,315	7,556	7,502	7,490	10,271
New Rietfontein	1,180	1,127	2,035	2,400	2,461	2,095
Nigel	4,550	4,196	4,138	4,256	4,270	3,841
Orion	2,647	2,791	3,006	3,057	3,420	2,850
Paarl Central.....	1,950	2,167	1,826	1,506	1,467	2,012
Princess Estate.....	1,950	1,655	1,590	1,675	1,836	1,960
Randfontein	3,597	3,436	3,445	3,390	3,591	4,056
Robinson	14,519	14,464	14,581	14,054	16,508	14,362
Roodepoort United M.R.	2,929	3,139	3,175	3,477	3,898	4,254
Salisbury	1,809	1,995	1,861	1,764	1,850	1,500
Sheba.....	7,584	5,008	4,671	5,295	4,567	4,637
Simmer and Jack.....	4,008	6,833	6,019	6,229	7,031	*
Stanhope	1,255	1,360	1,443	1,350	1,352	1,150
Transvaal Gold.....	1,905	2,350	2,300	2,135	2,360	2,650
Treasury.....	654	412	494	470	600	*
United Ivy Reef	222	374	153	147	143	156
Van Ryn	1,468	2,533	2,748	2,891	3,037	3,005
Village Main Reef	1,986	2,096	1,956	2,343	2,425	—
Wemmer	2,497	2,545	2,946	3,579	4,966	5,920
Wolhuter	2,533	2,653	2,708	2,745	2,745	2,725
Worcester Exploration...	2,558	2,637	2,613	2,831	2,713	2,528

* Return not yet to hand.

The following are the profits or losses (the latter being indicated by an asterisk) made by South African mining companies since the beginning of August:—

	Aug. £	Sept. £	Oct. £	Nov. £	Dec. £	Jan. £
City and Suburban	9,372	11,044	7,426	14,564	—	—
Crown Reef	10,762	11,464	10,753	10,536	10,004	9,385
Geldenhus Estate.....	7,070	12.050	7,300	9.109	9,400	—
Geldenhuis Main Reef...	1,985	2.291	2,315	1,863	1,965	2,055
George Goch	2,756	3,377	3,404	961	—	—
Glencairn	3,406	5,250	6 200	7,050	6,000	6,250
Henry Nourse	587	2,601	2 996	2,586	3,381	—
Jumpers.....	5,030	5,245	4,675	5,650	4,750	4,250
Langlaagte Royal	6,000	5,000	4,675	—	—	—
May Consolidated	516	626	1,170	1,651	—	—
Meyer and Charlton.....	5,202	5,046	5,237	4,909	3,180	2,930
New Chimes	3,002	3,559	3,305	3,529	3,994	—
New Heriot	6,041	7,500	7.090	6.226	8,500	—
New Kleinfontein	2.030	2.155	2,566	3,362	—	—
New Primrose	10,190	10,218	10,500	10,600	10,384	12,520
New Rietfontein	—	*493	1,470	2,358	—	—
Orion	3,130	3,122	5,103	5,582	6,000	—
Robinson	27,307	28,572	27,855	26,738	36,500	28,500
Roodepoort Un. M. R....	3,100	3,900	3,850	4,832	5,170	6,112
Salisbury	1,612	2,640	1,745	1,967	—	—
Simmer and Jack.....	5,631	5,006	2,995	2,415	3,300	3,300
Stanhope	1,168	1,706	1,055	1,722	—	—
Van Ryn.....	383	2,141	1,930	1,950	3,450	—
Wemmer	3,090	2,455	2,697	4,999	10,800	10,692
Wolhuter	2,500	2,952	—	2,966	—	—

THE MINERAL WEALTH OF SIBERIA.

(*Continued from page* 151.)

SILVER, LEAD, and COPPER.

RUMOURS of the occurrence of silver ores in the present Amour Governor-Generalship, at Daouria, on the banks of the Shilka and Argouna, reached Moscow during the reign of Peter the Great, and induced this monarch to dispatch a party of Greek miners to Siberia under the direction of one Levandian, who in 1698, guided by the discovery of remains of Chud workings on the Koultouchnaya Mountain, 16 versts' distance from Argouna, discovered a deposit of argentiferous lead ore in this locality, and began to exploit it. In 1704 silver smelting works, called the Nerchinsk, were erected by order of Peter I. At that time the whole of this portion of the Transbaikalia, which subsequently comprised the Nerchinsk mining region, was a perfectly wild country, only inhabited by nomad natives. To introduce a regular mining industry into this region it was necessary to take measures for the emigration of Russian settlers, and to overcome immense difficulties. This explains why at first the mining industry in the Nerchinsk region developed very slowly. But the production of silver began to increase considerably with the opening out of new mines, and with the growth of the population in the region.

The introduction of smelting by private Siberians also had a beneficial effect. The maximum production of silver was during the period 1763 to 1786, when it attained 629½ pouds. In 1790 the yield of silver fell to 219 pouds; it subsequently periodically fluctuated, and in 1847 it even fell below 200 pouds. From that time the production of silver in the Nerchinsk region declined completely, and from 64½ pouds smelted in 1850, it fell to 7¼ pouds in 1863, and then it temporarily ceased altogether. The reasons of this fall in the silver production of the Nerchinsk region were the flooding of the mines, the economic revolution produced by the abolition of the serfs, and of the obligatory labour at the works, and chiefly the revolution which took place in the management of the Nerchinsk Works, with the opening of new and richer gold works, when all the force and means of the region were directed to the extraction of gold, which became the chief object of production instead of silver and lead. Thus, there is no foundation for speaking of the exhaustion of the deposits of silver ore in the Nerchinsk region, and there is reason for supposing that the production of silver might revive with fresh energy, if the economic conditions of the region were improved. As regards the deposits of silver ores, it can only be said that as many as 90 different mines have been opened out in the Nerchinsk region; that vein deposits predominate in the south-western and pocket deposits in the north-eastern portion. Besides silver and lead, deposits of copper ores are also known, but although trials were made to exploit and smelt them, the results were not favourable. At the present time altogether 10 mines are worked, and their annual yield amounts to 100,000 pouds. The only existing silver smelting works in the Nerchinsk mining region, the Kroutomarsk Works, smelt about 50 pouds of silver a year.

A deposit of argentiferous lead ores has been discovered in the far eastern extremity of Siberia, in the valley of the River Vantsin at about 120 versts' distance from the Gulf of St. Olga and 37 versts from the Gulf of Preobrazhensk. Explorations of this deposit, made in 1872, showed the presence of rather vast ancient workings, and in recent times the exploitation of the ores was carried on by the Chinese.

Traces of Chud mines are found scattered about various parts of the region of the Kirghiz steppes, and in 1815 and 1820, these workings were the means of the discovery of rich deposits of argentiferous lead ores. A mining proprietor, Mr. Popov, guided by the indications of the natives, made the first claim for deposits of argentiferous lead and copper ores in the Kirghiz steppes, and obtained a concession for the acquirement of what lands and forests he might need for the exploitation of the mineral wealth of the region and for the erection of metallurgical works. Already in 1857, 106 copper workings and 44 argentiferous lead and copper ore mines were declared; and at the close of 1888, the Karkaralinsk district of the Semipalatinsk province, comprised 121 claims of ore deposits, both copper and argentiferous lead, while in the whole of the Kirghiz steppes up to 400 ore-bearing deposits are known. The richest argentiferous lead ore deposits are situated in the southern portion of the Karkaralinsk district between the town of Karkaralinsk and Lake Balkash, at a distance of 200 to 250 versts from the above-named town. This locality is desert and void of forest, and at a great distance from the river Irtysh, which is the only convenient means of communication in this region.

There is another tract of argentiferous lead, and partly argentiferous lead and copper ore deposits to the north of the above region at a distance of 75 to 100 versts from the town of Karkaralinsk to the south and south-west of this town. Among the many vein deposits of this district which have been opened out the vast deposit of Bor-Kara is particularly distinguished. The Bogoslovsk Mine was laid out on this deposit by Popov, and worked to a depth of 18 sagenes. This mine yielded both argentiferous lead and copper ores, which were smelted at two works erected by Popov, and also at the Altai Works to which they were temporarily transported. Deposits of copper ores are particularly abundant on the borders of the Karkaralinsk and Pavlodarsk districts. Many of these deposits occur in the form of veins of greater or less thickness, and in some instances somewhat considerable masses of native copper have been found. The copper ores extracted from this region were smelted at copper smelting works erected in the neighbourhood. Oxidised copper ores are found in the sandstone strata occurring to the south of the town of Semipalatinsk in the basin of the River Aschi-Sou, and in the north-western corner of the Karkaralinsk district, near the borders of the Akmolinsk province in the lower courses of the River Chiderta.

Copper smelting was first started in the Kirghiz steppes, at the Blagodato-Stefanovsk works, erected by Popov at about 80 versts' distance to the north-east of the town of Karkaralinsk. These works continued in action until 1861, when they were finally closed for want of fuel. Popov also erected the following metallurgical works:—The Alexandrovsk, which exclusively smelted argentiferous lead ores, and were situated at a distance of 35 versts to the north of the Bayan-Aoulsk station; the Bogoslovsk Works in the centre of the richest deposits of argentiferous lead and copper ores on Mount Berkara at 80 versts' distance to the south of Karkaralinsk; and the Ioanno-Predtechensk Works near the Kyziltavsk coal mines. All these works, as well as those erected by Mr. Kouznetsov near the Grachevsk station, on the left bank of the Irtysh, had no guarantee for the supply of fuel, and only worked intermittently, and their annual yield of copper did not exceed 8000 pouds.

The Spassk Copper Smelting Works were erected by the heirs of Mr. Ryazanov in the beginning of the sixties, in the district of Akmolinsk, near the borders of the Karkaralinsk district, and from that time the copper production of the Kirghiz steppes considerably increased, and in 1870 reached its highest normal of 38,800 pouds. During the entire period of the existence of the Spassk Works, which were closed in 1885, the production of copper at the Kirghiz mines varied between 18,500 and 34,000 pouds last year. After the closing of the Spassk Works, however, the Kirghiz steppes lost every importance among the copper producing regions of Russia.

The production of silver and lead at the Kirghiz works was carried on very irregularly, and in very limited quantities until 1883. In 1882 a rich and already known deposit of galena and oxidised lead and copper ores was explored at Kyzyl-Espe, situated in the Akchetavsk district, at a distance of about 80 versts to the north-north-west of Lake Balkash. An experimental smelting of these ores was begun in 1883, at the works erected at the mine, and also at the Kozmo-Demyanovsk works situated at 18 versts to the south-east of the town of Karkaralinsk, and 280 versts from the mine. The galena and lead ores extracted from the Kyzyl-Espe mine prove exceedingly rich, with about 12 zolotniks of silver per poud of ore, and about 50 to 70 per cent. of lead.

In recent years the production of silver and lead has not only increased at the works erected by Popov, but experimental smeltings have been carried on at the several other mines belonging to other persons.

The following table shows the position of the silver and lead production in the Kirghiz steppes since 1883:—

Years.	Production of Silver. Pounds.	Production of Lead. Pouds
1883	— 33¼	..... —
1884	70 ..... 27¾	 2,693
1885	35 ..... 2¼	 3,186
1886	84 ..... 23½	 8,937
1887	171 ..... 16¼	 11,363
1888	136 8	 22,544
1889	110 ..... 10½	 10,836
1890	72 ..... 28¾	 14,693
1891	96 ..... 13¾	 3,879

IRON.

At the present time there are only four ironworks in the whole of Siberia. It is true that, thanks to the vast river system offered by the Toura, Tobol, Irtysh, Obi and Tomi, up to the town of Tomsk, nearly the whole of Western Siberia is in direct water communication with the very foot of the Urals, and can conveniently supply itself with metals from this centre of the Russian mining and metallurgical industries where there are most vast and rich deposits of iron ore, and numerous ironworks. On the other hand, the system of the Amour enables goods transported by sea from Nikolaevsk to penetrate over 3000 versts into the interior of Siberia. It is certain, however, that notwithstanding the cheapness of transport by water, the vast distances traversed must greatly increase the price of goods carried in this manner. At the same time, the population of Siberia is in need of pig iron and iron, as well as of articles made of these metals, not only for domestic and agricultural purposes, but also for the vast gold industry, which offers a more and more urgent demand for metals and metallic goods. If up to the present time the iron industry is still very feebly developed in Siberia, it is not for want of ore deposits, but for purely economic and commercial reasons. It should be mentioned, however, that the deposits of iron ores near the town of Yeniseisk were worked by the native Ostiaks and Toungouze previous to the Russian domination of Siberia, and afterwards by the neighbouring peasants. The manufacture of iron direct from the ore, which was carried on here from ancient times, flourished to such an extent that at the beginning of the present century there were as many as 40 smithies, which yearly produced about 30,000 pouds of iron. The development of the gold industry, however, absorbed all the local labour, and put an end to this branch of industry.

The erection of ironworks within the Altai mining region was called forth by the requirements of the local mining and metallurgical industries. The first ironworks, the Tomsk, were erected in the Altai in 1771, to replace the Irbinsk Works, which were for a certain period under the jurisdiction of the Altai mining management, but situated at a considerable distance in the Government of Yeniseisk. After the erection of the Gourievsk Works in the Kouznetsk region of the Government of Tomsk on the River Bachata, for smelting the silver ores of the Salairsk Mines, some deposits of iron ores were discovered in the near neighbourhood of the works, and a small blast-furnace was erected for smelting the ore. In 1746 this furnace was replaced by one of greater dimensions, and in 1747 the the Gourievsk Ironworks were erected on this spot. The Tomsk Works were closed in 1864, and the manufacture of iron was then concentrated at the Gourievsk Works. The increased cost of charcoal fuel, owing to the exhaustion of the neighbouring forests, induced the works, in 1873, to introduce coal, and to replace the bloomery process for puddling. At the same time the increasing demand in the region for machines and steam engines led to the erection of special machine works, adjoining the Gourievsk Works, and the production of this department is increasing every year. The ore smelted at the Gourievsk works is a brown hematite, extracted from the deposits, lying near the villages of Salairsk, Roudnik, and Aripichevo; both these deposits are considered very rich. The ores contain from 38·5 to 44·3 per cent. of iron. The coal consumed at the Gourievsk works is from different pits situated at a small distance from the works. Coke is made from coal from the Bachatsk deposit. Limestone flux, fire-clay, building stone and other indispensable materials for carrying on works, are exploited in the near neighbourhood. Nearly all the workmen employed at the works are local inhabitants. The following table gives the production of the works during the last six years in pouds.

Years	Pig iron smelted.	Iron	Iron goods.	Iron castings.
1886 ..	123,980 ..	72,220 ..	6,570 ..	5,000
1887 ..	133,300 ..	44,040 ..	5,500 ..	4,820
1888 ..	70,880 ..	60,825 ..	5,675 ..	8,080
1889 ..	99,010 ..	50,630 ..	4,300 ..	8,900
1890 ..	115,960 ..	60,130 ..	2,230 ..	9,300
1891 ..	126,020 ..	63,230 ..	6,163 ..	10,830

The excellent quality of the iron ores discovered in the Minousinsk region of the Government of Yeniseisk, led to the construction of two ironworks in this district. The Irbinsk Ironworks were erected by the Government as early as 1740, on the right bank of the Yenisei, at a distance of about 100 versts to the north-east of the town of Minousinsk. In 1774 the Irbinsk Works were given over to a private individual, and after passing from one hand to another, they became quite disorganised, and were ultimately closed. A rich deposit of magnetic iron ore is known within the limits of the 125,000 desiatines of forest belonging to these works. Another locality, rich in iron ore, occurs in the south-western corner of the Government of Yeniseisk, where the spurs of the Altai and Sayansk Mountains hinder the rapid course of the River Abakana, which falls into the Yenisei, at several versts from the borders of the Government of Tomsk, and 80 versts from the northern frontier of China.

(To be continued.)

CARDIFF CASTLE GOLD MINES (LIMITED).—The first batch of letters of allotment and regret has been posted.

FORTHCOMING MEETINGS.

*** *We shall be obliged if Secretaries or other Officials of Mining, Railway and other Companies' will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings - whether statutory, semi-annual, annual, general or extraordinary, confirmatory or adjourned —in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Balance sheets, reports and other matter to be submitted at such meetings should, where possible, accompany the intimations of the meetings sent*

Name of Company.	Date.	Time.	Place.
South African Trust and Finance.....	Feb. 18	12 noon	Winchester Ho.
West Mallina Gold Company	Feb. 19	12 noon.	Winchester Ho.
Lower Roodeport	Feb. 19	2.30 p.m.	Winchester Ho.
Chameleon Gold.....	Feb. 19	2.30 p.m	Cannon-st. Ho.
Nine Reefs.....	Feb. 21	11.30a.m.	Cannon-st. Ho.
United Mexican Mining	Feb. 22	12 noon.	Winchester Ho.
Lisbon-Berlyn	Feb. 22	2.0 p.m.	Cannon-st. Ho.

WHITE FEATHER REWARD CLAIM (LIMITED).—An extraordinary general meeting of the shareholders of this company was held on Wednesday, at Winchester House, the chair being occupied by Mr. F. A. Thompson.—Mr. A. H. P. Stoneham read the notice convening the meeting.—The Chairman explained that the object of the meeting was simply to confirm a resolution passed at a previous meeting increasing the capital of the company to £80,000 by the creation of 20,000 new shares of £1 each. Since the meeting at which the resolution was originally passed they had received but little information from the colony beyond the fact that the larger portion of the machinery had been delivered upon the property, while it was hoped that the rest would be there within a week or two, if it had not already arrived. The letter containing this information was dated January 10, so that the balance might reasonably be assumed to have since arrived. The machinery would be erected at the earliest possible moment under proper supervision, and as soon as any crushings took place the shareholders would be informed. The Chairman concluded by moving the confirmation of the resolution.—Mr. R. S. L. Hardie seconded the motion, which was carried unanimously. The Chairman, in answer to a question of a shareholder, said that there were ten stamps on the ground at the present time, but the mill had been so arranged that this number could be doubled without any inconvenience so soon as the development, which was being speedily pushed forward, was sufficiently advanced.

ACCIDENTS IN WESTERN MINES.—A return relating to the fatal accidents which occurred in the mines of the United Kingdom during 1894, has been issued from the Home Office. In the South Western District, which includes Cornwall and Devon, there were 10 fatalities in and about metalliferous mines. These are classed as follows:—Fall of ground, 1; in shafts—falling from part way down 1, miscellaneous 2; underground—by explosives 2, sundries, 2;—by surface machinery 2.

BLACK HILLS GOLD AND SILVER PRODUCT.—The amount of gold produced in the Black Hills during the year 1893 was 221,675,858 ounces, and the coinage value $4,119,083·27; silver, 137,915·20 ounces, of a coinage value of $96 540·64. Conservative and well-informed mining men, says the *Pioneer*, place the product of 1894 at:—Gold, 443,351,716 ounces; coinage value, $8,238,166·54; silver, 172,394 ounces; value, $120,675·80.

PREMIER CONCESSIONS OF MOZAMBIQUE (LIMITED). — The registered office of this company has been *temporarily* removed to No. 2, Church-court, Clements-lane, E.C

IDAHO'S MINERAL OUTPUT FOR 1894.—The mineral output of Idaho for 1894 is estimated at $5,873,000, distributed as follows:—Gold, $1,879,000; silver, $2,359,000; lead, $1,635,000. The lead is computed at 3 cents. per lb. and silver at 60 cents. per ounce, making the quantity 90,905 ounces of gold, 3,933,333 ounces of silver and 54,500,000 lbs. of lead. The output for 1893 was 81,930 ounces of gold valued at $1,693,641; 3,455,662 ounces of silver valued at $2,418,962 and 72,135,581 lbs. of lead valued at $2,524,753.

FATAL MINE EXPLOSION IN SILESIA.—A terrible explosion of fire-damp occurred yesterday (Friday) in the Queen Louise mine, at Zabrze. Fourteen miners were killed, and eight seriously injured.

WARNING TO MINERS.—Miners are requested to exercise great caution in their dealings with coal dust, and the escape of firedamp just now, for atmospheric pressure is again increasing from a large anti-cyclone situated over northern Europe, and the air over all our mining districts remains in a very dry state.

COAL DUST EXPLOSIONS IN MINES.—Mr. Asquith stated in the House on Thursday, that an offer had been made to the Government to place at their disposal certain apparatus for testing explosives in the presence of coal-dust and fire-damp, but he was not able to say whether it was suitable for the purpose. He would, however enquire, but he might remind the House that Her Majesty's Inspectors were assisting in similar experiments in the North of England, and it was his intention to introduce into Parliament shortly a Bill dealing with the same subject.

ROBINSON GOLD MINES (LIMITED).—The first batch of letters of allotment has been posted.

THE African Gold Recovery Company (Limited) announce that 51,334 ounces of gold have been recovered at the Randt and 7300 ounces in other districts—total 58,634 ounces during January by means of their MacArthur-Forrest cyanide process. The December total was 62,000 ounces.

THE LONDONDERRY GOLD MINES (LIMITED).—An extraordinary general meeting of the shareholders of the Londonderry Gold Mines (Limited) was held on Wednesday at the offices 3, Gracechurch-street, when resolutions, amending the Articles of Association affecting the qualification of directors, passed at a previous meeting, were unanimously confirmed.

FORTHCOMING SALE.—On reference to our advertising columns particulars will be found of the sale of the Phœnix and West Phœnix United Mines, which is to take place at Webbs Hotel, Liskeard on Thursday week.

The NINE REEFS GOLD MINING COMPANY (LIMITED) has sold the gold produced in December for £392 3s. 7d.

The MYSORE REEFS (KANGUNDY) COMPANY (LIMITED) has sold the gold produced in December for £171 9s. 11d.

The OOREGUM GOLD MINING COMPANY OF INDIA (LIMITED) has sold the gold obtained in December £19,783 13s.

The NUNDYDROOG COMPANY (LIMITED) has sold the gold obtained during the month of December last, which realised £11,541 3s.

The MYSORE GOLD MINING COMPANY (LIMITED) has sold the gold obtained during the month of December last, which realised £19,697 7s. 3d.

The BALAGHAT MYSORE MINES (LIMITED) has sold the gold obtained during the month of December last, which realised £445 10s. 7d.

The directors of the SALT UNION propose paying a dividend of 2½ per cent. for the year 1894, carrying forward £10,000.

The YERRAKONDA GOLD MINING COMPANY (LIMITED) has sold the gold produced in December for £62 5s. 10d.

The secretary of the ISLE OF MAN MINING COMPANY has sold 100 tons of this company's ore (chats) at £7 per ton.

ZAPOPAN MINES.—Mail advices from the mines report that "1200 tons of ore have been crushed for a return of 946 ounces (smelted) free gold. This crushing is from quartz taken from the north shaft, which is not the richest part of the property. The above result does not include any gold contained in the tailings.

C. PASS & SON (Limited), BRISTOL,
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS, ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c. and DROSS or ORES containing
TIN, COPPER, LEAD, AND ANTIMONY.

HENRY WIGGIN & CO. (Limited),
NICKEL AND COBALT REFINERS,
MAKERS OF BEST RED LEAD FOR FLINT GLASS MANUFACTURERS,
BIRMINGHAM.

LAMBERT'S WHARFAGE CO.,
PRINCE OF WALES DOCK, SWANSEA.
Ores, Mattes, Regulus, and Bars received and prepared for market. Copper, Lead, Tin, Spelter, and Pig Iron Received, Weighed, and Sampled, and Warrants issued against same.
N.B.—Warrants are on accepted list of London Metal Exchange.
Regular lines of steamers from America, Europe, &c.
Consign goods to Lambert's Cranes, Prince of Wales Dock, Swansea.

PACIFIC MINING AGENCY AND TRUST COMPANY.
A Corporation organised under the Laws of the State of California
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IRVING M. SCOTT, Manager Union Iron Works.
JACOB H. NEFF, President California Miners' Association.
P. N. LILIENTHAL, Manager Anglo-California Bank (Limited).
W. F. GOAD, Vice-President, Wells, Fargo, and Co.
D. M. BURNS, Capitalist.
R. C. CHAMBERS, Manager Ontario Mine, Utah.
WILLIAM C. RALSTON, Secretary (Secretary California Miners Association).
BANKERS—The ANGLO-CALIFORNIAN BANK (Limited).
HEAD OFFICE — MILLS BUILDING, SAN FRANCISCO, CAL.
THIS COMPANY sells Mines, Mining Claims, Ditch Properties, and Water Rights ON COMMISSION, and will act as Agent and Broker for the Sale and Purchase of such Properties.
It is intended to conduct the Purchase and Sale of Mining Claims, Ditch Properties, and Water Rights on the same basis as a real estate transaction.
The Company is prohibited by its Articles of Incorporation from buying or selling on its own behalf, or except upon commission, or as agent or factor for others.
The buyer pays no fees whatever, and there is no incentive to advance the price beyond the original figures at which the price and commission have been agreed upon with the seller.
It is not intended only to negotiate the sale of an entire property but interests in such may be sold or money obtained for development work.
This Company especially solicits the business of making reports or examinations for non-resident mine owners on any of their mines in the United States, and obtaining special information as to their condition and so forth (said reports being confidential).
Those who conduct the business of the Company have had long experience in mining operations, and it is their intention to place the Company in a position to inspire the confidence of all who seek its assistance in its integrity and fair dealing.
We respectfully refer to any Bank in the City of San Francisco and to the Anglo-Californian Bank (Limited), London, as to the standing of the Board of Directors of this Company.
Descriptions of properties for sale with maps, reports and all necessary information, are left on file in the office of the Company. Abstracts of such reports with prices of mines will be furnished pon application.
California has produced £267,000,000 in gold, and is still producing £2,680,000 a year. There are thousands of claims requiring capital for development. In other Pacific Coast States and Territories there are abundant opportunities for investment in mines of gold, silver, copper, lead, coal, and so forth. Information concerning these will be furnished by this Company on application.
This Company will also furnish competent engineers, superintendents, foremen, miners, millmen, assayers and others connected with the mining industry on application, furnishing their references and so forth.—Cable Address, "CHAPIN," San Francisco.

THE BUTE WORKS SUPPLY COMPANY, CARDIFF.
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Telegrams: Gething, Cardiff.
WAGONS.—New to Latest Regulations, 50 with one end two Side and two Bottom Doors, Wheels with WROUGHT Bosses, large capacity (12 inches longer and 4 inches deeper than usual), ready for Lettering. New to Latest Regulations, one end and two side doors, sides and ends 3 inch red deals, all inside underframe timbers of English oak; delivery, about 15 per week, commencing forthwith. 50 End Tip 10-ton Coal Wagons to New Regulations, equal to new, prompt delivery.
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"THE MINING JOURNAL,"
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Editorial and Advertisement Offices:
18, FINCH LANE, LONDON, E.C.
Telegraphic and Cablegraphic Address: "TUTWORK, LONDON."
Codes used: "A.B.C.," Moreing's, and "Universal."

CONTENTS

Of this Number of "The Mining Journal, Railway and Commercial Gazette," February 16, 1895.

NEW PATENTS	177
CONTRACTS OPEN	177
ANSWERS TO CORRESPONDENTS	177
THE CYANIDE PROCESS	178
WEST KOOTENAY GOLD MINES	178
MINING IN SPAIN (ASTURIAS)	179
PARIS LETTER	179
FOUR MONTHS OF TRAVEL IN BRITISH GUIANA	179
MEETINGS OF MINING COMPANIES—	
Great Dundas Gold; Gold Fields of Mashonaland; Cumberland Gold; Austin Gold Mines (Limited)	180
Gresham Gold; Hannan's Brown Hill Gold; Kaboonga Gold	181
EAST RAND PROPRIETARY	182
ELECTRICITY AS APPLIED TO MINES	182
TIN TICKETING	182
MINING IN CORNWALL AND DEVON	182
THE FEDERATED INSTITUTE OF MINING ENGINEERS	183
COMPANY FINANCE	184
THE RAND OUTPUT FOR JANUARY	184
THE MINERAL WEALTH OF SIBERIA	185
FORTHCOMING MEETINGS	185
LEADING ARTICLES—	
The Concentration and Washing of Coal	186
The South African Trust and Finance Company	187
NOTES AND COMMENTS	187
THE MINING MARKET	188
LATEST FROM THE MINES; Cablegrams and Telegrams	189
THE METAL MARKETS—	
The London Metal Market	189
"THE MINING JOURNAL" SHARE LIST	190-191
PROVINCIAL SHARE MARKETS	191
CORRESPONDENCE	192
NEW ISSUE	192
REPORTS FROM THE MINES	192
BOARD OF TRADE RETURNS FOR JANUARY	195
MECHANICAL ENGINEERING, &c.	
The Compact High Steam and Low Water Safety Valve; The Compact Deadweight Safety Valve	195
MINING NOTES FROM JOHANNESBURG	196
ADVERTISEMENTS—(*See Index to Trade Advertisements, p. 174*).	

LONDON: FEBRUARY 16, 1895.

THE CONCENTRATION AND WASHING OF COAL.

DURING the past year we wrote fully on several occasions on the subject of the concentration of metalliferous minerals, by means of which the ores as they come from the mine are enriched, by being deprived of their sterile gangue, and so made marketable. As we then fully explained all the principles involved and the machinery employed for carrying out the practical work, we do not propose to go over the same ground again at this moment, except in so far as it may be necessary to show how the same principles, and, to a large extent, the same machinery, have been adapted to the washing and concentration of coal. Practically the same reasons which necessitate the concentration of metalliferous minerals apply to that of coal. In the former, the desire is to get rid of the sterile gangue, which lowers the price of the market product and involves difficulties with the smelters; while in the latter the end sought is to reduce the quantity of ash, under which term is included all non-combustible material. This is a matter of vital importance in the coal trade, for, whether the coal is to be used for steam purposes or the production of coke, it is an all-important point that it should be as free as possible from ash. Some of the better coal seams are naturally in a state of sufficient purity for all purposes, but, as these become exhausted, the problem of the purification of the coal from inferior seams must be faced; and although this has been accomplished for many years at the collieries in Germany and Belgium, it is only within comparatively recent times that English companies have followed their example, attention being turned thereto by the great success which attended the erection of a plant on the Lührig system at the Motherwell Collieries.

In metalliferous concentration the amount of gangue or ash—to keep up the comparison—is greatly in excess, and in ordinary cases is as much as 85 to 90 per cent. of the bulk, and its specific gravity is less than that of the mineral to be enriched. In coal, on the contrary, the shale which forms the ash does not make up the bulk of the matter to be enriched, and rarely exceeds 25 per cent., while the specific gravity of coal is less than that of the shale, being in some cases 1·3, while that of the shale is 2·3. This latter fact is noteworthy, because it entails a reversal of ideas in the mind of the man accustomed to the concentration of metalliferous ores, as with him the waste product, being the lightest, is that rejected by the machinery from the tails of the jiggers; whereas in coal concentration, the pure coal is thus rejected, while the heavier shale falls into the cases below the jiggers, where one is accustomed to find the rich concentrated ores. The principle which underlies the two systems of concentration is identical, in both cases being based upon the law that if two bodies of equal size and similar form, but of different specific gravities, are allowed to fall simultaneously through a column of water, the heavier will reach the bottom in advance of the lighter one, the reason being that the water offers more resistance to the lighter body in proportion to its mass than to the heavier one, the surface which it presents to the water being greater in proportion to its actual weight; or, in other words, to the total force which gravity exercises upon it. It is absolutely necessary to the success of the jigging process, which is the practical outcome of this law, that the mineral to be concentrated shall have previously been classified mechanically to approximately the same-sized particles, or otherwise the machines will not be able to take advantage of the difference in the specific gravities owing to the action of another law, which forms the basis of hydraulic classification. The principle which we have just stated is that of equal sizes and similar forms, but different specific gravities, and is that which is followed by coarse concentration after mechanical sizing. The other is its converse, for, if we take two bodies of equal specific gravity and similar form, but unequal size, the larger body will reach the bottom first, its surface resistance being less in proportion to its contents than that of the smaller body. In other words, the lighter bodies do not settle so quickly, and so permit of the introduction of what is known as hydraulic classification, as distinct from sieving by mechanical means.

We will now see how these laws are applied to the concentration of coal, the problem being how to treat (say) 1500 tons of coal, containing (say) 23 per cent. of ash per day of 10 hours so as to form two products—the one being pure coal, with less than 6 per cent. of ash; and the other shale, with not more than 2 per cent. of coal, the total cost of hand-picking, sorting, washing, and loading into trucks not to exceed eight-tenths of a penny per ton of coal handled. Such results are regularly obtained under contracts involving heavy penalties; but the machinery must, of course, be largely automatic, so as to require but little hand-labour, and it must also be of the most perfect style not only to attain its object, but also that it may run continuously night and day for many months without breakdowns, which not only mean delay, but largely increased expenses. The coal as it comes from the pits is conveyed by chain haulage in tubs into the "washery" or concentrating mill, and is then tipped on to rocking screens with 2 inch round holes. For dry coal above 2 inch these screens are preferable to the circular trommels. The coal is thus separated into two sizes. The coarse coal over 2 inches falls on to a long picking belt, and is then sorted by hand in the usual way. Arrived at the end of the picking belt, the coal is conveyed at once by another belt direct into the railway trucks, the inclination of the belt being so arranged that the coal cannot slip down with a run, and so be broken by falling into the trucks. The refuse picked out of the large coal is of two classes, the one being pure shale, which is at once taken to the waste heap; and the other a mixed product of coal attached to or interstratified with the shale, which will require to be crushed before separation can take place. After being crushed in a stone-breaker it rejoins the coal less than 2 inches which passed through the first screen, and with it is collected in a large hopper or bin, from whence it is elevated to the top of the building for mechanical classification. For this purpose a large cylindrical drum or trommel is provided, having several concentric shells of perforated steel sheeting, by which means the coal is sorted into four sizes called treble nuts, 2 inches to 1¼ inch; double nuts, 1¼ inch to ⅞ inch; single nuts, ⅞ inch to $\frac{5}{16}$ inch; peas and small, under $\frac{5}{16}$ inch; which pass on to the hydraulic classifier. In metalliferous concentration it will be remembered that there is a separate trommel for each class of ore, and that trommels with two or more concentric shells or sheathings are rarely used, owing partly to the greater weight of material in the trommel at a time, and partly to the excessive wear of the screens, due to the friction of the hard quartz gangue, which entails constant repair. When classified the coal falls into side-delivery jiggers in which the sieves have holes of smaller diameter than those of the feeding trommel. As fast as the shale accumulates above a certain thickness on the beds it is automatically removed, and elevated to a set of crushing rolls, after which it is again classified and returns to finer jiggers in order that any coal combined with it may be recovered. The washed coal falls over the tailings end of the jigger, and is

delivered into perforated draining shoots where the excess of water is got rid of, and the coal passed on to loading hoppers of suitable capacity, under which the railway trucks are run and loaded as fast as the coal accumulates. In order to give an extra polish to the coal, and make it more presentable to the eye, it is played upon by a spray of clean water while travelling from the jiggers to the hoppers, and its appearance is thus greatly improved.

The small coal under $\frac{5}{16}$ inch, from the main trommel, is carried in a stream over a hydraulic classifier of the well-known inverted pyramid type, and here it is deposited in constantly decreasing sizes according to the second principle which we laid down, the largest coal coming to rest first, and the smallest at the extreme end of the classifier. It is thus divided into any convenient number of sizes, each of which is led to a separate jigger, the holes in the sieves of which are of the same gauge as that of the coal fed into it, but which are covered with a bed of felspar which has a specific gravity of about 2·6, or, roughly, equal to that of the shale. The down-stroke of the piston of the jigger opens up this bed, allowing time for the shale to pass through, but closing up with the return stroke, and so preventing the coal from following. The fine-washed coal thus rejected from the jiggers is passed through a draining trommel having holes of 1·64 inch diameter, and is thus separated from the fine sludge; it is afterwards elevated into storage hoppers, and is then sent on to the coking ovens, or otherwise disposed off. The fine sludge or slimes are settled in tanks, the bottom of which is formed of a movable belt, which constantly lifts out the mud as fast as it settles; and this mud can either be used for firing under the boilers, or if the percentage of ash in the fine-washed coal is under the stipulated amount, it can be mixed with it and so utilised. The cost of coal concentration varies from $\frac{1}{2}$d. to $\frac{3}{4}$d. per ton on the raw material, and is less than a penny on the clean coal, so that this process allows of the conversion of what was practically rubbish, or a waste product worth at the most 3s. per ton if a market could be obtained for it, into clean marketable coal for steam, house, or coking purposes, which at ordinary prices would yield a profit of from 1s. to 1s. 4d. a ton on its selling price. A large number of these coal washers are erected, or are now being erected in the various coal districts of England, the fine small coal, which is too small for steam purposes, being converted into coke, or mixed with pitch and pressed into briquettes, in either of which forms it finds a ready sale. It seems to us that there is here a splendid opening for the employment of capital by erecting a washery, combined with coke ovens and a briquette factory, in some suitable locality in the neighbourhood of a colliery district, provided with good means of rail and water communication, and so converting the waste coal of the pits into clean coal, coke, and briquettes; just as in metalliferous mining districts what are known as custom's mills are put up for the concentration of the ores from the surrounding mines. In washing coal the enormous quantities which can be treated daily are a great element in the reduction of cost, and there are doubtless many colliery districts which would welcome the introduction of a washery of large capacity to which the small proprietors could sell their now practically valueless impure coal, the conversion of which into suitable products would yield a large profit upon the capital employed for the purpose, on the lines we have sketched out.

THE SOUTH AFRICAN TRUST AND FINANCE COMPANY.

IT will be within the recollection of our readers that, in July last, a meeting of this company was held, at which the proceedings were not conspicuously harmonious, chiefly owing to various allegations against the directors made by Major COTTON, at one time himself a director of the company. The outcome of it all was the appointment of a committee of investigation, chiefly with the object of looking into these allegations. This committee have, during the week, issued their rather voluminous report, but it is full of valuable information, and contains much useful criticism and practical advice. It is not often—indeed, we cannot, for the moment, recall a similar instance—that a committee of investigation find themselves at issue on vital matters, yet this is what has happened in the case before us. Three agree perfectly, and issue a joint report, whilst the fourth finds it necessary to issue another embodying his own views and opinions. This is a pity, for it would seem that, after all, no great good had resulted from the appointment of a committee, and we fear that at the meeting on Monday, the shareholders will be as divided as ever. Luckily, Mr. HILBURY is by himself, and as the other report is signed by the three remaining members of the committee, it would be but natural for the shareholders, in the main, to give them their support. For our part, we feel inclined to do the same. In our opinion, the judgment arrived at is well thought out, and eminently wise, and not even the directors could take umbrage at the temperate expressions used. With regard to the board, the committee are of opinion—even Mr. HILBURY himself—that they "appear to have been unfortunate in their first ventures." They support this conclusion by strong evidence, and this the directors themselves should be the first to admit. They do not accuse the board of wilfully neglecting the company's business, or of inviting misfortune by gross acts of carelessness, but they simply accuse them of want of judgment—a weakness of which many boards of directors are guilty. The committee take care to state this view in words which cannot be misunderstood:—"The committee are of opinion that, while errors of judgment have been made, they show no disloyalty to the company's interest; and nothing during the enquiry has been found which, in the slightest degree reflects upon the honour or integrity of the Chairman, directors, or any of the company's managers or officials." Considering that Major COTTON's allegations were of a rather serious nature, the shareholders will be grateful for this expression of opinion on the part of their representatives. One of the evidences of want of judgment was the investment of the capital of the company in certain securities which have not been remunerative. The Chairman in evidence admitted that prior to the appointment of Messrs. CAMPBELL and EVANS as general managers in South Africa, in 1890, the board had no definite policy, and that they invested in shares, debentures, and other Stock Exchange securities. In many of these investments, which were not exclusively confined to South African securities, the company appears to have been unfortunate; and the list of holdings at the date of Messrs. CAMPBELL and EVANS' appointment was, in the opinion of the committee, one on which the then directors cannot be congratulated. As a set-off against this, the committee express their belief that to the Chairman belongs the credit of founding the South African office, with Messrs. CAMPBELL and EVANS at its head. Mr. CAMPBELL stated in his evidence that he suggested a definite policy to the board, which the latter accepted. This policy was to acquire mining properties on the Main Reef, or a dominating influence in such properties, and then to develop them. To this policy, the shareholders will be glad to hear, and to the properties acquired under it, must be attributed the fact that the company was, in June, 1894, in possession of valuable gold mining interests which, in the opinion of the committee, have saved the company from loss of capital, and which, furthermore, should yield handsome profits. One of the most serious allegations against the board is that the staff in South Africa have been allowed to over-draw their accounts to such an extent as to cripple the company in its financial arrangements, and the committee consider that the granting of these overdrafts without prescribing a fixed limit was quite indefensible and opposed to all business principles. With one exception (an amount of £150) the overdrafts have now all been repaid, with interest. The committee find that the call of July 2nd, 1894—which was so heavy and unexpected—was immediately necessitated by the receipt of a cable message from the Johannesburg office announcing the decision of the company's bankers in South Africa to call in part of the overdraft granted to the company, which amounted to about £30,000. There was at that time also an indebtedness to the London bankers, secured by second debentures, of about £25,000. The company's funds were, unfortunately, locked up in securities not readily realisable, and it appears to the committee that the call was inevitable. The proposal of Major COTTON to avoid that call by discounting the company's bills, was, the committee consider, so fraught with danger, that the board very wisely refused to agree to it. The committee pay a high tribute to the late general manager, Mr. W. J. CAMPBELL, for the directness and clearness with which he gave his evidence, and which supported in great measure the charges of ineptness and inertness brought against the board. Shareholders will be very pleased to hear the conclusion to which the committee have arrived as to the present position of the company, which, after an exhaustive examination of the assets and liabilities, they find to be financially sound. Their principal recommendation to the shareholders is, that the latter should insist upon the board being constituted of gentlemen well acquainted with the methods which obtain in South African mining circles. "They should be gentlemen who can secure the co-operation of the other powerful groups which, more or less, dominate the mining business of the Rand, and, when advisable, obtain an interest in their undertakings." The only thing upon which one can calculate with certainty is, that the proceedings at next Monday's meeting will be extremely lively.

NOTES AND COMMENTS.

AFTER the encouraging and authoritative reports as to the value of the Great Dundas property, drawn up by Mr. Woodward, the shareholders may patiently await ulterior developments without any undue anxiety. Some time must necessarily elapse, owing to the distance separating the mine from the larger centres of communication, before reports as full as could be desired can come to hand, but, in the meantime, there is the consciousness that the company is ably represented and managed in the colony, so that there need be no uneasiness as to the manner in which things are progressing there. With the further development and civilising of these districts of a comparatively new country, there will, doubtless, be established a vastly improved system of communication, and news will come to hand with much greater rapidity than now. Mr. Woodward's name has come prominently to the fore in connection with the West Australian mining boom, as a man of wide experience, speaking with all the weight attaching to a Government appointment. Of the reef he wrote:—"This reef is a large lode mass on the west or hanging wall side of a large ironstone vein, which rises about 50 feet above the level of the lode." And then:—"A shaft has been sunk 45 feet on the lode mass, the stone being very rich in the shaft for the first 15 feet, after which the shoot was lost dipping to the south, but was again cut by a drive at the bottom of the shaft, from which some very good stone has been obtained." Passages like this, amply supported by additional testimony of the kind, hardly require any elucidatofy comment.

RARELY does a company go to the public for subscription with such a remarkable unanimity of testimony in its favour as that which has sent Hannan's Brown Hill shares to a premium. If—as would appear to be the case—the concern has the elements of success in it, the board are evidently determined to make the best of them. No time has been lost. The cable has transmitted order after order to the other side, with the result that matters are now very far ahead indeed, considering that the company has only seen the light of day for a month or two. To obviate the difficulties occasioned by a want of water, the plant sent out is of a kind to work dry for the most part and what water is necessary may be salt, without any injurious effects. The preliminary assays of 20, 30, and even 70 ounces, must have rather startled the engineers who made them, and it was only after repeated testing that the assayers at length consented to believe that such exceptional figures really represented the value of the ore under examination. As the Chairman modestly remarked on Thursday, much smaller assays than those would make the mine a remarkably successful one. A value of 2 ounces running continuously through the mine would be sufficient to place it on a good sound basis.

THERE is no sign of a lessening of public interest in the mines of West Australia. Rather does the boom—for so all along the history of the movement it could justly be called—seem to gather strength for a culmination beyond anything which the more sober-minded among the investing public could have ventured to anticipate. Now that the long succession of statutory meetings are being held in London, while new companies are coming out weekly, with a promise of more to follow, West Australia seems to occupy even a larger space in the public attention and favour than ever before. Nor are the English public the only people who are supremely interested in the Western colony. Paris has fastened itself latterly upon the mining industry, and the publication of a new financial paper, representative solely of that department of finance which concerns itself with mining, would argue that the fact is no symptom of a mere passing whim. In England the management of the vast majority of the West Australian companies is in highly capable hands, and every effort is being made to push forward vigorously the preparations preliminary to mining, and in a short space of time the industrial community should be beginning to talk about results.

A RATHER serious warning is given to European, Australian, American, and home investors with regard to the Deep Level properties on the Witwatersrand gold field by the Johannesburg *South African Financial Record*. It has been confidently predicted that 1895 would see the Deep Level securities rise to the same rank as those of the dividend-paying outcrop companies, and it has been urged that Deep Level mining will, indeed, become the leading feature of the industry, and surpass the yields of the so-called surface mines. It is, however, quite erroneous, the Johannesburg paper remarks, to suppose that "nobody doubts the permanence of the banket beds of the Main Reef to as great a depth as it is possible to work." All that has yet been proved is that at four spots several miles apart the reef series have been found at a depth of from 1000 to 2343 feet vertical; and, so far as the rest of the Deep Level Rand is concerned, little or nothing is known. Indeed, what has been ascertained is "not calculated to allay the anxiety of those prudent ones who look forward with trepidation to the future of the mining industry here (Johannesburg)—not the immediate future, be it understood, but that separated from the present by, let us say, ten years. At the Rose Deep a very large and strata-disturbing dyke has been met with, and the position of the reefs in that property will, in all probability, be very far removed from that which has been anticipated. At the Wemmer Deep, present indications all point to a similar state of things." It has been urged that the position of the dykes has been ascertained, but the *Record* urges that the facts do not justify this opinion. Moreover, "the dangers in Deep Level mining are not confined to lateral thrusts and the disturbing influences of diabase or dolerite dykes, but are most to be feared from down-throws or from the breaking-off of the entire series at an inconsiderable depth, with the collapse of Witwatersrand as a consequence."

THE same paper, in an article headed "A Coming Field," draws attention to the richness of the Murchison range, the district in which is situated the Sutherland Reef Mine. To a great number on this side of the Channel this will be surprising news, for although several companies have been at work in the district, the results have not come up to anything like anticipations. Naturally, therefore, people are beginning to doubt—if they are not already possessed of the conviction—that, in spite of glowing reports, "there is nothing in it." However, the statement which the *Record* pleases itself to make will induce the public to regard the district with renewed favour. "The effect which the completion of the Selati Railway will have upon the development of the Murchison range must be obvious to anyone who has visited that district. There one finds two distinct and well-marked lines of auriferous quartz, a few miles apart from each other, both running roughly parallel, east and west. Between these there is, undoubtedly, at least one other belt in the flat, which prospectors, in their eagerness to keep on high ground, have largely overlooked, only unearthing it here and there. The southernmost and this line will not, probably, present insurmountable difficulties to the local metallurgist, as the auriferous ores are, generally speaking, free milling; but the northernmost and greatest of the three will give much trouble, unless intelligently handled from the start. Of all accessory minerals which the gold amalgamator loathes none are so disconcerting as 'black jack' and antimony sulphide, and although the former is not, to the best of our belief, present in the Murchison, the latter is in larger or smaller quantities in every ton of the ore, and, as we have lately had an opportunity of observing, actually in the gold itself in mechanical junction. In the case of a one-mine field this provision of Nature's might be conclusive evidence against the payability of the district, but in the case of the Murchison range we do not think that this is the case."

"AT the present time it is very difficult to gauge the length of the auriferous strata in that district, for prospecting has been most perfunctory, and hardly continuous from one 'find' to another; but if we put it at some 40 miles, continuous, let it be remembered, along the antimony line, we shall hardly be exceeding the truth, and may, indeed, be much under it. To this must be added some 12 miles for the President line, and half that

distance for the intermediate, making a total of 58 miles, at least, of auriferous strata. For a quartz reefing district the Murchison is peculiarly regular; on any one of the lines one can trace a stratum for miles and miles without meeting an inconvenient break, and this regularity is one of the strongest arguments in favour of the future prosperity of the field, as also is the fact that the veins are not gash ones, but fissures in the truest sense of the word. From the Murchison Crown to the Gravelotte, past the Murchison, Alf's Fortune, the Free State, Welnecia, to Witkopjes and the Caledonian, is a long stretch of many miles, and along the whole distance, and indeed much further on to the Green Reef, near Lole, there is not a block of 12 claims to be found that does not, in some part or other of it, carry visible gold; and the same, in a lesser degree perhaps, may be written of the line from the Sutherland Reef to La France, passing the Bonanza, the President, Moore's Hope, and the Blue Jacket. So far as the gold contents are concerned it is difficult to speak with the same amount of confidence. The Sutherland Reef has been proved to carry good gold at 300 feet depth, the President, the Gravelotte, the Blue Jacket, Beberovich's, the Murchison, the Free State, and the Welnecia at varying depths over 100 feet. Crushings on a small scale have taken place at the Sutherland, Beberovich's, the President, and the Caledonian, and the results have been, if not exactly startling, at least highly encouraging. Over 30 dwts. is not a bad return, even for an isolated field like the Murchison range, and when the railway comes into the mountains some time this year, should leave a large margin of profit. The drawbacks to the country are two-fold—one, the fever in its season; and the other, the want of water near the mines. The former is a much dreaded and equally over-rated bugbear; it lasts but for three months, and statistics prove that less than 2 per cent. of those attacked succumb to its ravages, or are permanently indisposed."

"THE water difficulty is more serious, and will cost a considerable sum of money to combat. If, when properly opened, the Melati, Gesaqua and other streams, now thought by some to be annual, but by us perennial, prove to be as we think, the difficulty will be greatly lessened; but, if not, and, perhaps, even in any case, the waters from high up the Selati, or Great Letaba, will have to be led on by some such scheme as that lately propounded and fathered on the Government. The initial cost will be great, but we believe that the revenue to be derived will pay good interest on the amount so expended. The question of the treatment of the ore will not be one of great difficulty; for the first hundred feet a great deal of free gold will be extracted, for the reefs are uniformly high grade; below that depth, and in some cases, before it is attained, concentrating will be imperative, and the product obtained will have to be shipped to Europe. But the ores are rich enough to stand the cost, and to leave a very large margin of profit in addition. The potential wealth of the Murchison range is, indeed, enormous; the reefs are rich and highly mineralised; they extend for many miles; they are of good width, and easily worked; wood is in abundance and water also not too far away to render its use prohibitive. Finally, railway communication will, within a few months, be established with the coast, and a good harbour. The rush to peg out claims in this once-deserted, but never-proved, district, is not, therefore, so extraordinary as might at first appear, for those who know it best, with the edge worn off their sanguine temperament by the bitter experience of the past, still maintain—they have this time good reason for their belief—that it is the coming field." Among the first to rejoice over this unexpected and exceedingly encouraging news will be the shareholders of the Sutherland Reef.

THE sixth annual report of the Montana State Inspector of Mines contain practical suggestions which it would be advisable to put into practice as early as possible. By investigation he has found that the major portion of accidents from falling cross-heads have occurred below the 100 feet level, and he, therefore, thinks it would not be unreasonable to take some action, having for its object the abolition of cross-heads at a depth not lower than 100 feet. He has also discovered that the shorter the cross-head (up and down the shaft) the greater is their liability to stick in the guides, thereby causing a greater number of accidents. The law, at present, prohibits their working below the 300 feet level in vertical shafts, but this, the Inspector considers, is too deep where a mine has the assurance of being worked as a permanent concern, as they have neither bonnet nor safety appliances of any kind, and should a rope break while men are going down or coming up it would bring about an awful catastrophe, and men's bodies would be mangled to an unrecognisable condition; or a man may become dizzy and fall off the cross-head with the same results. He praises very highly the manner in which mining is conducted in Montana. The majority of the mines, he says, are comparatively safe, or as much so as present development will admit, and he goes on to say: "Very much credit is due to the managers of Montana's largest mines, particularly in Silver Bow county, for the means adopted and put in execution to prevent accidents and provide ways of escape in case of sudden and unforeseen fire or flood."

DURING his tour of inspection he was agreeably disappointed to find the mines generally, throughout the State, in a much better condition of ventilation than he had anticipated. He adds that managers are using every endeavour to furnish plenty of fresh air for men underground, which keeps them in better health and spirits, a condition resulting in the performance of greater labour, From conversations held with different mine managers, he found them strongly in favour of a universal State code of signals for use in every mine, for it is a fact that a major portion of the fatal accidents which have occurred in Montana during the past 15 years, are attributable solely to the misunderstanding of signals, the forgetfulness of engineers, or from ignorance of the code of signals in use when a new engineer takes charge. The report of eputy-Inspector Miles also contains several practical suggestions for the safety of miners. He calls attention to the necessity of a greater protection for those who daily enter the mines by cage. He thinks some means should be adopted for the perfect safety of those who are compelled to go down into the mines not less than twice each shift, and the many who descend not less than 12 or 15 times every day. His suggestion is that all cages should be guarded with a permanent network of wire, not less than 3½ feet in height on either end, and wire network doors the full width of the cage for either side. The network could be attached to a sheet iron not less than 6 inches in width, which would be a part of the door or ends, and would rest on the floor of the cage when in motion.

THE latest news from Wales hardly shows that the tin-plate position there is improving, and many are the speculations concerning whither the trade is leading. With 208 mills idle throughout South Wales and Monmouthshire, out of a total of some 500 built, and a continued lessening of the American demand, it needs no great argument to prove that those who are in work can hope for no more than to be able to keep it. Besides the mills in which operations are now suspended, many of the tin-houses supplied from the works running are only engaged half-time. There are some makers who prophecy bad times for four or five years ahead, and who speak of the laying down of tin-plate plants in America as a most serious business for Wales. Already the operatives have at numbers of the works submitted to a reduction in all of 22½ per cent.—first, in the shape of a 12½ per cent. drop, and more recently a 10 per cent.; and still it is contended that costs of production are too high. How to further economise, however, is a problem which at present defies an answer, and makers are becoming thoroughly alarmed. At some mills it is asserted that current selling prices have dropped 15 per cent. behind the cost of manufacture, though at others more favourably situated the difference is not so great.

THE MINING MARKET.

FRIDAY EVENING.

A large carry-over. — Heavy contangoes. — South Africans firm, but quiet. — Chartered inclined to dulness.—West Australians dull at close.

DURING this week business has been persistently influenced by the carry-over, and on that account there has been no great magnitude of operations, though the market has, on the whole, remained steady. The carry-over in the South African market was of wide dimensions. Among the low-priced shares heavy contangoes—measuring 25 per cent.—were the rule; but with the generality of gold shares rates varied from 6 to 8 per cent. A comparison of the making-up prices with those of the last account shows a large number of small declines, while among the most notable of the improvements are those registered in Cities, Wemmers, and De Beers. A brisk recommencement of business for the new account was made, and in several of the South African shares a spurt took place. Some of the more highly-priced Kaffirs registered distinct improvements. West Australians and Miscellaneous remained quiet. The continued arrangements for the carry-over interfered to some extent with the business on Tuesday, but though operations were restricted, prices on the whole exhibited a tendency to strengthen. Most of the more solid gold shares hardened in value, while in the Land and Diamond markets there was a much improved state of affairs. The West Australian market had a steady tone, and even amongst Miscellaneous shares a more buoyant characteristic spread itself. Taken as a whole, the South African market was in a very firm condition throughout Wednesday, although there were but one or two shares which particularly engrossed attention. For the large body of shares a fair number of enquiries were made, and the general conditions of the market were highly favourable. West Australian shares were made the subject of but little really brisk business; not that the public have withdrawn any of their favour from this section of the market, but that the prevailing conditions were not favourable to operations on an extended scale. Notwithstanding that the attention was largely claimed by the conclusion of the carry-over, business on Thursday in the Mining Market, was of a distinctly animated character. A large number of improvements occurred all through the different sections. In the Land section Chartered were duller, but Diamonds were firmer in tone. There was rather more doing in the Miscellaneous market, the movements being moderate in extent, but unmistakeably better in character. West Australian shares were flat, and realisations became very general. At the close, in fact, this department is the one spot of the market not already showing an unmistakeable inclination upwards.

British.

There is little to report in connection with the British Mining Market, except a depression in Dolcoath, which have been freely offered.—Fallen: Carn Brea, 10s.; Dolcoath, £4; Killifreth, 2s. 6d.; South Crofty, 2s. 6d.; Wheal Grenville, 10s.—Risen: None.

South African Shares.

A lively recommencement of business took place in the South African market on Monday after the settlement of the preliminaries of the carry-over. Some of the more solid Kaffirs made substantial improvement during the day; rises of ⅜ occurred in Rand Mines, Simmers, and Ferreiras. Gains of 1/16 also occurred in Modders, Geldenhuis Deep, and Villages, while Geldenhuis Estate and Van Ryn are each 1/16 to the good. Among the shares recording small rises were Crowns, Crœsus Deep, Gold Fields Deep, Heriot, Jubilee, Jumpers, Langlaagte Estate, Metropolitan, United Roodepoort, and Worcester. Against these declines took place in Salisburys, Champ d'Or, Crœsus, Glendenhuis Main Reef, Kleinfontein, Langlaagte Royal, Roodepoort Deep, and Wemmer. In the Land section Chartered were stronger, closing at 41s. 6d.; while, as a whole, the group were better in tone. Tuesday brought a deeper improvement into the South African market, the more valuable shares being especially improved. Rand Mines gained ½ to 20⅜, Modders recovered to 8 11/16; Cities advanced ⅜ to 17, while Heriots at 8 7/16, and Meyer and Charlton at 6 7/16, were both ¼ better. Ferreiras rose ⅛ to 15¼, and Geldenhuis Deep gained the same fraction to 6⅜. Henry Nourse improved to 5½. Rises of 1/16 occurred in Champ d'Or, Chimes, Consolidated Deep, Crowns, Crœsus, Crœsus Deep, Eastleigh, Geldenhuis Estate, George Goch, Gold Fields Deep, Jubilee, Nigel, Village Main Reef, and Transvaal Gold, while Orions and Wolhuters were ⅛ better. In the Land section, Chartered and Bechs both gained 1s; the former to 42s. 6d., and the latter to 34s. Among Diamonds, De Beers finished ¼ higher at 20 1/16, while Jagers were ⅛ to the good at 17⅞. East Rand shares were on Wednesday the most conspicuous feature of the South African market, but the large number of enquiries made for these shares only resulted in a small rise. Wemmers also were in favour, and closed at 7 1/16, whilst Meyer and Charlton gained 3/16 to 6⅝. Rietfontein were bought, and rallied 1/16 to 2 1/16. City and Suburban registered a further rise of ⅛ to 17⅜. Jubilees rose 1/16 to 9 1/16. Simmers were 1/16 better at 11 1/16, while Transvaal Gold were ¼ up at 3 1/16. Spes Bona, on persistent enquiries, rallied to 33s. 6d. Geldenhuis Estate and Geldenhuis Deep were much improved, and Geldenhuis Main Reef were rather better. Gains of ⅛ were registered in Modderfontein, Crown Reef, Henry Nourse, Roodepoort Deep, and Salisbury. Smaller improvements took place in Buffelsdoorn, Crœsus, Grahamstown, Langlaagte Estate, Nigel, South-West Rand, Wolhuter, Worcester, Champ d'Or Deep, and May. In the Land section Chartered were brisk, but did not change in tone. Among diamonds, De Beers closed better at 20 7/16, while Jagers remained motionless. Business on Thursday in the South African market was larger in volume and more hopeful in character than on the preceding day. The greatest rise was registered in Wemmers, which rose ⅜ to 8 1/16. Heriots were largely bought, and rose ⅛ to 8 1/16. Modders rose to 8 1/16, Simmers to 11 1/16. Nigels started at 5 and added 1/16 to its price. Henry Nourse, Robinson, and Jumpers showed strength. Rises of ⅛ occurred in Jubilee, George Goch, Metropolitan, Princess, and Salisbury, and smaller advances in Village Main Reef and United Roodepoort. Slight improvements also took place in Afrikander, Buffelsdoorn, Chimes, Clewer Estate, Crœsus Deep, Durban, Geldenhuis Estate, Orion, Paarl Central, Randfontein, Roodepoort Deep, Wolhuter, Block B, Champ d'Or Deep, Luipaard's Vlei, May, Moodies, and Pigg's Peak. Small declines, on the other hand took place in Eastleigh, Langlaagte Estate, Meyer and Charlton, Primrose, Rietfontein, United Langlaagte, Van Ryn, Transvaal Gold, and Sutherland Reef. Land shares were not so buoyant, but in the Diamond section De Beers went up to 20¼.

Gold shares have been lively to day, except at the finish, when they slowed up. Wemmers have been the chief feature at a further rise. The Diamond group has been active—especially St. Augustine, which had a sharp rise to 9s. 6d. Chartered have been strong in the Land group.

Risen: African Coal, 3d.; African Concession, 6d.; Bantjes, 6s. 3d.; Bechuanaland (allowing for dividend), 1s.; Block B, 6d.; Buffelsdoorn, 1s. 3d.; Champ d'Or, 2s. 6d.; Champ d'Or Deep, 1s.; Chartered, 1s.; City and Suburban, 42s. 6d.; Consolidated Gold Fields, 5s.; Crœsus Deep, 2s. 6d.; Crown, 5s.; De Beers, 15s.; Eastleigh, 2s. 6d.; East Rand, 2s. 6d.; Ferreira, 10s.; Frank Johnson, 1s.; Geldenhuis Deep, 5s.; Geldenhuis Estate, 7s. 6d.; George Goch, 5s.; Glencairn, 1s. 3d; Gold Fields Deep, 1s. 3d.; Grahamstown, 1s.; Griqualond, 2s. 6d.; Harmony, 1s.; Henry Nourse, 15s.; Heriot, 15s.; Johannesburg Investment, 1s. 3d.; Jubilee, 15s.; Jumpers, 10s.; Kleinfontein, 2s. 6d.; Klerksdorp, 1s.; Lisbon, 3d.; Luipaards, 6d.; May, 1s. 3d.; Metropolitan, 2s. 6d.; Meyer and Charlton, 5s.; Modderfontein, 15s.; New Jagers, 12s. 6d.; New Primrose, 5s.; New Randfontein, 1s. 3d.; New Virginia, 3d.; Nigel, 10s.; Orion, 5s.; Oceana, 2s. 6d.; Oceana Development, 3s. 9d.; Pardy's 5s.; Paarl, 6d.; Potchefstroom, 1s.; Princess, 3s. 9d.; Randfontein, 1s.; Rand Mines, 20s.; Robinson, 5s.; Roodepoort Deep, 3s. 9d.; Salisbury, 2s. 6d.; Simmer and Jack, 12s. 6d.; South African Exploration, 5s.; South African Finance, 6d.; Spes Bona, 1s. 6d.; Stanhope, 2s. 6d.; St. Augustine, 5s.; Sutherland Reef, 1s.; United Langlaagte, 5s.; United Roodepoort, 2s. 6d.; Van Ryn, 12s. 6d.; Village, 7s. 6d.; Wemmer, 25s.; Witwatersrand (Knights), 2s. 6d.; Wolhuter, 7s. 6d.—Fallen: Abercorn, 6d.; African Consolidated, 3d.; Alexandra Estate, 1s.; Balkis Eersteling, 3d.; Banket, 3d.; Barrett, 1s.; Consolidated Deep, 2s. 6d.; Exploring, 2s. 6d.; Geldenhuis Southern, 1s. 6d.; Ginsberg, 6d.; Guy Fawkes, 1s.; Guy Fawkes (8s. paid), 1s.; Langlaagte, 2s. 6d.; Langlaagte Royal, 2s. 6d.; Main Reef, 6d.; Mashonaland Agency, 1s. 3d.; Massi Kessi, 1s.; New Belgium, 6d.; New Louis d'Or, 3d.; New Transvaal Land, 6d.; Otto's Kopje, 3d.; Ophir, 6d.; Rietfontein, 5s.; Sheba, 2s.; Silati, 6d.; South-West Rand, 1s. 3d.; Transvaal Coal, 2s. 6d.; Transvaal Estate, 1s. 6d.; Willoughby Concessions, 1s. 3d.; Zambesia, 2s. 6d.

Miscellaneous Shares.

Quietude prevailed on Monday in the Miscellaneous market. Tolima "A" fell ⅜ to 6⅜; on the other hand Broken Hill recovered 6d. to 37s. 6d. Burma Ruby and Harquahala were both 6d. better at 12s.; while Nundydroog at 39s. were 1s. lower. Rio Tinto fell ⅝ to 13. Among Westralians, Bayley's Reward at 11s. 6d., Big Blow at ⅞, and Gold Estates at 1¼, were all rather better. Mallina receded to ⅞ sellers, but subsequently rallied to 1⅛. Abbott were quoted at 11s. 6d., or 2s. 3d. down. A fairly steady tone prevailed in the West Australian market on Tuesday. Improvements were registered in Gold Fields, Lindsays, Austins, and Consolidated Gold Mines. Hampton Lands, however, were a shade off, while the Plains remained quite firm. On Wednesday, the conditions affecting the West Australian and Miscellaneous market were not conducive to active business. Lindsays were deal in at 1 7/16, West Australian Mining improved to 6s. 6d., and Mallina finished at 1 1/16, but Great Boulder (fully paid) lost 6d. to 10s. 6d. Hampton Plains suffered a small recession to 1⅝, and West Australia Gold Fields receded to 3⅝, London and West Australia Exploration being also 1/16 lower at 1⅝. Indian shares were not at all lively. Mysore dropped 1/16 at 2⅜, and Nundydroog 1s. at 38s., Nine Reefs (fully paid), Mysore West, Mysore Wynaad, Mysore Reefs, and Balaghat all being rather easier. St. John del Rey finished 6d. higher at 27s. 6d., and a rise of 3d. carried Idaho to 3s. 6d. Cape Copper hardened to 1 9/16, but Rio Tinto lost ⅝. West Australians were flat on Thursday. Gold Fields, White Feathers, and Consolidated Gold Mines were ⅛ lower, and smaller losses also occurred in Hampton Lands, Mainlands, Concessions, Lindsays, Bayleys, and Mining. In the Indian section, Nundydroog gained 1/16 to 1 1/16, but Gold Fields of Mysore were dull at a fall of 6d. to 18s. 6d. Elsewhere De Lamar recovered to 25s., St. John del Rey to 28s., and Burma Ruby to 13s.; but Day Dawn Block were down to 10s.

There is practically nothing to report for to-day either in the West Australian or the Miscellaneous markets, both of which have been dull.

Risen: Australasian, 3d.; Bonnie Dundee, 6d.; Broken Hill Proprietary, 2s. 6d.; Carrington, 1s. 3d.; Colombian Hydraulic, 6d.; Holcomb, 3d.; Kaboonga, 6d.; Kapanga, 3d.; Macate, 3d.; Ooregum, 1s. 3d.; St. John del Rey, 6d.; Waihi, 2s. 6d.—Fallen: Argentine Consolidated, 6d.; Australian Broken Hill, 3d.; Brilliant, 6d.; Brilliant Block, 2s. 6d.; Burma Ruby, 1s. 6d.; Champion, 1s. 3d.; Copiapo, 2s. 6d.; Don Pedro, 6d. (allow call); Elkhorn, 1s.; Frontino, 1s. 3d.; Golden Leaf, 9d.; Gold Fields of Mysore, 1s.; Harquahala, 6d.; Kempinkote, 3d.; La Yesca, 3d.; Mount Morgan, 9d. (allow div.); Mysore Harnhalli, 6d.; Mysore West, 6d.; New Queen, 3d.; Nine Reefs, 1s. 6d.; Ooregum Preference, 1s. 3d.; Palmarejo, 3d.; Pinos Altos, 6d.; Poorman, 3d.; Rio Tinto, 6s. 3d.; Springdale, 3d.; West Argentine, 6d.; Yerrakonda, 6d.

Australian.

Risen: Mainland Consolidated, 2s. 6d.—Fallen: Abbots, 1s. 3d.; Austin, 2s. 6d.; Bayley's, 6d.; Great Boulder, 1s.; Hampton Land, 3s. 9d.; Hampton Plains, 2s. 6d.; London and Western Australian, 1s. 3d.; West Australian Concessions, 2s. 6d.; West Australian Exploring, 1s. 3d.; West Australian Gold Fields, 6s. 3d.; West Australian Mining, 1s. 6d.; White Feather, 3s. 9d.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

AFRIKANDER.—The return of gold won for the month of January was 301 ounces from 1200 tons milled, and 320 ounces from 1200 tons of tailings treated by cyanide, the total being 621 ounces. The manager adds that owing to flooding of the mine by heavy rains, the ore sent to the mill had to be extracted from the upper and poorer levels.

AFRICAN ALLUVIAL.—Mr. Niness, in reply to a message sent instructing him to commence work on a considerable scale, has cabled for the necessary funds for that purpose, and they have been duly remitted to him by cable.

AFRICAN COAL AND EXPLORATION.—The secretary announces that the negotiations for the purchase of the New Middelburg property have been completed, and henceforward the sales of coal will be on the company's account.

APPANTOO GOLD.—Return for January :—" 620 tons crushed, yielded 280 ounces gold."

BAKER'S CREEK,—Cable advice has been received from Adelaide that a further dividend (39th) of 1s. per share has been declared, payable there on February 27.

BAYLEY'S REWARD CLAIM.—Week's run: 200 ounces, 148 tons.

BAYLEY'S No. 1 SOUTH.—Telegram from the mine, January 8:—" Will get up steam for trial to-morrow; water very scarce; do not know how to manage; good gold still showing; breaking quartz."

BLOCK B LANGLAAGTE ESTATE. — Production for January. By cable: Mill. Stamps running, 70; ore crushed, 7964 tons; gold retorted, 2226 ounces.—Tailings, cyanide process: Tons treated, 5590; gold recovered, 703 ounces.—Concentrates, cyanide process: Tons treated, 152; gold recovered, 221 ounces; total gold recovered, 3150 ounces.

BRILLIANT BLOCK.—Messrs. Burkitt, Munro, and Co., of 16, Cornhill, have received the following cablegram, dated Brisbane. 11th inst.:—"Brilliant Block: This mine is looking well generally. The average value of the ore is 17 dwts. per ton. The amount of ore reserve is steadily increasing. In the No. 7 east level the quality of ore is worth from 1 ounce to 1½ ounce per ton. We will resume sinking the underlie shaft in the course of a few days. In this mine ore averaging 17 dwts. per ton is quite sufficient to enable the company to pay 6d. a share monthly and add to the reserve fund. With an increase of yield per ton dividends can be increased proportionately.

BROKEN HILL PROPRIETARY.—For the week ending the 14th inst. 8570 tons of ore were treated, yielding 830 tons of lead, containing 218,980 ounces of silver; also 1306 tons treated by amalgamating and leaching plants, producing 15,838 ounces silver. The price of the shares in Melbourne is £1 16s. 3d. buyers.

BUFFELSDOORN ESTATE.—Production for January 4800 ounces.

CASSEL COLLIERY.—A cablegram just received gives the output for the month of January as 17,000 tons; profit £3300.

CAYLLOMA SILVER.—Production for month of January, 28,000 ounces fine in export ores, 11,000 ounces fine in bullion.

COOLGARDIE GOLD SYNDICATE (Sherlaw's). — The following cablegram has just come to hand from Mr. Sherlaw:—"Arrived at Albany 9th. Leaving for Coolgardie. Latest news is very good."

CROWN REEF.—Total profit for January, £9385, against £10,004.

DAY DAWN P.C.—The following cablegram has been received from the manager at Charters Towers giving the result of the crushing for the fortnight ended February 9:—"No. 1 shaft, 45 tons 36 ounces; No. 3 shaft, 197 tons 319 ounces; tailings, 14 ounces; total, 369 ounces. Have shipped per s.s. *Jelunga* 598 ounces."

DAY DAWN BLOCK AND WYNDHAM.—The following cablegram from Charters Towers give the result of the crushing for the fortnight ended the 9th inst.:—"Tons crushed, 700; yield of gold, 470 ounces; approximate value, £1620; fortnight's expenses, £1190."

DURBAN ROODEPOORT. — The following results for January have been received by cable:—"Quartz milled, 8025 tons; 60 stamps; 28 days; 3782 ounces.—Tailings treated, 6885 tons; 1564 ounces; total, 5346 ounces."

ELKHORN. — Bullion produced in the mill for the week ended February 9, 8600 ounces.

FERREIRA.—Copy of cablegram received from Johannesburg:—"Results for January, 1895. Tons crushed, 4,163; bar gold extracted, 4768 ounces; concentrates caught, 156 tons; assay value of concentrates, 6 ounces 7 dwts. fine gold per ton. Cyanide Works: Bullion produced from tailings, 1461 ounces."

FORBES REEF.—Result for January, 116 ounces against 159 ounces for December.

GELDENHUIS ESTATE.—Crushed last month, 10,399 tons; obtained from mill, 4168 ounces; tailings by cyanide, 1798 ounces; total, 5966 ounces.

GOLD ESTATES OF AUSTRALIA.—The following cable has been received:—"Trenton engine shaft 195 feet, cut reef casing nice gold. Have struck a strong body of water, flooded, pumping 2000 hours, stone untried."

HARRIETVILLE.—The directors have received a telegram from Mr. T. G. Davey, dated 11th February, giving the result obtained during the past four weeks as follows:—"400 tons, 173 ounces."

HAURAKI.—The directors have received the following telegram from the manager:—"The reef shows gold freely. Developments opening up splendidly. Likely to give large profits. Have resumed sinking."

JOE'S REEF UNITED (Sheba).—The secretary reports receipt of the following cablegram from the mine manager:—"Estimated cost of repairs, owing to floods, £500. Expect to commence crushing in two months' time."

JUMPERS. — Results for January:—Crushed 10,471 tons obtained 3670 ounces and concentrates equal to 691 ounces: total 4361 ounces; profit, £4250. The December yield was 4205 ounces.

KANGARILLA.—The directors have received the following report as to the erection of apparatus for the treatment of their sulphide ores:—"Good progress is being made." The plant shipped from this country reached Adelaide on the 7th inst.

LAKE VIEW AND BOULDER EAST.—Mr. Samuel James, of 3, Copthall Chambers, Angel-court, E.C., has received the following cablegram, dated Perth, the 13th inst.:—"Lake View and Boulder East crushed 88 tons, yielding 447 ounces of gold."

LIONSDALE ESTATES.—The following is a copy of cablegram received from the manager dated yesterday:—"4 feet good quartz on the hanging wall. Have not yet got to the footwall."

LANGLAAGTE.—Production for January. Mill: Stamps running, 160; ore crushed, 21,057 tons; gold retorted, 7121 ounces.—Tailings (cyanide process): Tons treated, 19,8 0; gold recovered, 2690 ounces. Concentrates (cyanide process): Tons treated, 438; gold recovered, 990 ounces: total gold recovered, 10,801 ounces, against 11,731 ounces for December.

MACATE.—Copy of cable received yesterday: "Sending £570. There is great trouble in getting the donkeys, owing to the state of the country. We shall be able to get out of the difficulty in the course of a few days."

METROPOLITAN. — During January crushed 4300 tons; obtained 1230 ounces of gold; 700 ounces also obtained from tailings; total, 1930 ounces.

MOSMAN.—The directors have received the following cablegram from Charters Towers: "Have crushed 86 tons of quartz from North Australian shaft for 128 ounces of gold and 107 tons of quartz from Wyndham shaft for 412 ounces of gold. The mine is looking well above the No. 9 level south. Have also crushed 112 tons from our Rainbow tribute stopes for 476 ounces of gold. The approximate value of the North Australian and Wyndham returns is £1860."

MOUNT LEYSHON.—The Mount Leyshon (Limited) have received the following cablegram, dated 13th inst, from the manager at Charters Towers, giving the fortnightly crushing:—"1600 tons crushed 217 ounces gold; 40 stamps mill ran 12 days. Profit, £35.

MOUNT MORGAN (Queensland).—Results for the month of January:—"Tons chlorinated, 7003; gold returned, 9709 ounces."

NEW DOURO.—Mill return for month of January:—Mill worked, 8 days; ore crushed, 62 tons; gold recovered, 40 ounces.

NEW GUSTON.—Information has been received from the mine to the following effect:—"Have shipped during December month 1542 tons of ore. Value of silver, taken at 55 cents per ounce, $17,000. Mine expenses, $12,050."

NEW PINOS ALTOS. — The bullion returns for the five weeks ended the 2nd inst. were $76,000; expenses, $42,000.

NEW PRIMROSE. —Production for January, 10,271 ounces; profit, £10,520; 160 stamps, 28 days. The December yield was 7490 ounces. The profit for January was £12,520, and not £10,520 as previously reported.

NEW RIETFONTEIN.—During January crushed 2610 tons; obtained 1488 ounces of gold; cyanide works treated 2394 tons of tailings, yielded 531 ounces; concentrates yielded 76 ounces; total, 2095 ounces against 2461 ounces for December.

NEW STEYN ESTATE.—A cablegram states that the company has paid £300 for a year's refusal of the unproclaimed portion of the farm Vlakfontein, equal to 900 claims. If the option is exercised, the price to be paid will be £15,000.

NEW ST. AUGUSTINE —A cablegram from the mine, dated February 13, states:—"2000 loads yielded 114 carats, two-thirds limestone."

ORION.—Last month's crushings yielded from plates 1600 ounces of gold, and from tailings 1250 ounces of gold. The December yield was 3500 ounces.

PAARL CENTRAL.—Results for January. Mill: Crushed 4456 tons, yielding 1605 ounces. Cyanide works: Treated 3545 tons, yielding 407 ounces; total, 2012 ounces; total value, £6839. The yield for December was 1467 ounces.

ROBINSON. — Production for January. By cable: Mill. 70 stamps at work; 9597 tons of ore crushed; yield in smelted gold, 8544 ounces; from concentrates (by chlorination), 1201 ounces; from tailings (cyanide process), 2276 ounces; from own ore, 12,021 ounces; from concentrates bought (by chlorination), 2341 ounces; total gold recovered, 14,362 ounces; profit for month, £28,500.

SHEBA.—The following cablegram has been received from the general manager (first word of cablegram being repeated): "Dam and Queen's river water race destroyed, £23,000; damages are estimated to be about—mine, £1000; new works, £26000; steam tramway, £1000; Oriental water furrow, £200; the road to the mine, £400. Cancel the contract order, or so much as is uncompleted. Cyanide Coke Zinc: Think that clean-up at the end of the month will pay all expenses (of) for the month of February." The mutilated word in the cablegram of the 14th inst. has been repeated, and reads:—"Original invoice cost." In answer to the board's cablegram, the general manager cables: — "The stock of tailings not destroyed by floods, and remaining is 3000 tons.

SIERRA BUTTES.—Result of the working at the company's mines for January. Sierra Buttes Mine: Total receipts, $2073 equal £415; total working expenses, $1658 equal £332. Plumas Eureka Mine: Total receipts, $4383 equal £877; total working expenses, $3591 equal £718. Uncle Sam Mine: Total receipts, $13,056 equal £2611; total working expenses, $7864 equal £1573.

SIMMER AND JACK.—Last month's crushing yielded 4082 ounces of gold from mill, 398 ounces of gold by chlorination, and 2595 ounces of gold from tailings by cyanide.

SUTHERLAND REEF.—A cablegram received from the manager, dated February 9, advises that "crushing will commence towards the end of this week; delay been caused by bad weather."

SPRINGDALE.—The following telegram, dated February 9, has been received from Denver:—"Mill will be finished on or about February 20. The lowest level 350 feet. Mountain Lion shows a body of ore 13 feet wide, embracing 12 inches smelting ore; 5 ounces of gold per ton. Pushing matters forward with all possible speed at Pine Creek."

TRANSVAAL COAL TRUST.—The following is copy of a cablegram which has been received from Johannesburg, with reference to the company's operations for the month of January:—"Output 25,000 tons, profit £4800."

UNITED MEXICAN. — San Cayetano: Gross returns for week ended February 2, $970; expenses, $1320; loss, $350.—El Cubo: Gross returns for week ended February 2, $7530; expenses, $5936; profit, $1594.

VAN RYN.—Net profit for month, £2775; cyanide works, £530. Total profit, £3305.

VICTORY.—The following cablegram has been received from the head office in Sydney:—"Crushing for the fortnight from No. 2 shaft, 166 tons for 90 ounces of gold."

WARATAH.—The following telegram has been received from the company's manager at Croydon, Queensland:—"Will increase the lease to 25 acres. I estimate the value of the ore in the new strike at £12 per ton."

WENTWORTH GOLD FIELDS PROPRIETARY.—The following cablegram has been received from the mine:—"Four weeks' crushing: 910 tons of ore have been crushed, yielding 6300 ounces of gold. The stopes still hold good in the 500 feet level Phœnix Mine, and we have commenced driving along the contact on the 600 feet level. Ore has been found on the 600 feet level in the Aladdin's Mine 40 feet from the Phœnix (Proprietary) boundary.

WEMMER.—The net profit from operations last month is £10,692.

WHITE FEATHER MAIN REEF.—A cablegram has been received announcing that the transfer of blocks Nos. 277 and 278 in the White Feather district, formerly known as Bissenberger's, and adjoining the property of the White Feather Reward Claim (Limited), has been duly registered to the White Feather Main Reef Gold Mining Company (Limited).

WORCESTER EXPLORATION. — Last month's crushings yielded 2528 ounces of gold. The yield for December was 2713 ounces, and the profit £5981.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, FEBRUARY 15.

Copper.

THE speculative market opened very flat, and continued so until very near the close, there having been almost no speculative buying orders, whilst a depressing effect was exerted by certain selling orders believed to be connected with Stock Exchange operations. G.M.B.'s opened lower at £39 17s. 6d. s.c., and £40 5s. for three months. In the absence of speculative interest these values were soon displaced by a still lower range, and £39 12s. 6d. s.c. was touched on Monday, £39 6s. 3d. on Tuesday, £39 10s., being realised shortly afterwards. On Wednesday the spot value was steady at £39 8s. 9d. and £39 7s. 6d., and on Thursday we witnessed a brisk recovery to £32 15s. s.c. and £40 2s. 6d. three months. To-day s.c. was successively treated at £39 15s., £39 13s. 9d., and £39 12s. 6d., and three months at £40 2s. 6d., £40, and £40 1s. 3d., the market closing steady at £39 12s. 6d. to £39 15s. s.c. and £40 to £40 2s. 6d. three months. In contra distinction to the dull G.M.B. market, there has been a good enquiry for refined copper, especially for electrolytic make.

Tin

was a dull market on Monday, and only 140 tons changed hands, the value being about £59 15s. cash and £59 12s. 6d. forward. Tuesday passed off steadily, and without any change worth noting; and the same may be said also of Wednesday's market. Thursday, however, brought an influx of buying orders, resulting in an advance to £60 5s. three months, and £60 10s. three months open in buyers' option. To-day the market has kept steady, and about 225 tons have changed hands at £60 5s. and £60 2s. 6d. three months, and £60 5s. s.c., the close being firm at £60 5s. to £60 7s. 6d. s.c., and £60 2s. 6d. to £60 5s. three months. The Dutch market has, in its main movements, followed ours. It opened with all positions, Billiton at fl. 36¼, and after declining to fl. 36, closes at 36½, with Banca at fl. 36¾.

Pig Iron

opened in Glasgow at 41s. 3d. s.c. Scotch, on Monday, and fluctuated thenceforward between 41s. 6½d. and 41s. 4d., closing steady with sellers at 41s. 5d. s.c., and 41s. 7d. a month. The shipments for the week ending February 9 were 4678 tons' or 1555 tons more than in the parallel week of last year. Hematite has declined from 42s. 5½d. to 42s. 4d., and Middlesbrough from 34s. 5½d. to 34s. 5d.

Lead

has been an uneventful market, closing quiet at £9 10s. to £9 11s. 3d. soft foreign, and £9 12s. 6d. English.

Spelter,

after showing signs of weakness, closes rather firmer again at £13 17s. 6d. to £14 ordinaries, and £14 14s. specials.

Antimony

is quiet, but steady, at £32.

Quicksilver

also remains steady, closing at £6 10s. firsts, and £6 9s. seconds.

The following are to-night's (February 15) prices of metals:—

	£	s.	d.	£	s.	d.
Copper.						
Tough cake and ingot	42	15	0	43	0	0
Best selected	43	10	0	44	0	0
Sheets and sheathing	50	10	0	51	0	0
Flat bottoms	53	10	0	54	0	0
Chili bars, Good merchantable, Copper tubes, seamless — spot, & 3 months respectively	39	13	9	40	1	3
	—			0	0	7½
Alloys.						
BRASS: Wire	—			0	0	5
" Tubes (solid drawn)	—			0	0	5⅛
" Sheets	—			0	0	5½
PHOSPHOR BRONZE: Alloys II.	—			78	0	0
" " III. or V (Cog Wheel Brand)	—			81	0	0
" " VII.	—			83	0	0
" " XI.	—			78	0	0
" " Vulcan brand A1	—			72	0	0
DURO METAL	—			73	0	0
BULL'S METAL	—			65	0	0
Ferrobronze (Vivian's).						
Ingots ...per lb.	0	0	5⅝		—	
Ordinary sheets, plates, bolts and bars	0	0	6½		—	
Screw bolts and nuts	0	0	8		—	
Pump rods, plain	0	0	7		—	
" finished	0	0	10		—	
DELTA METAL: No. 4 (per ton)					—	
" Sheets and plates (per lb.)					—	
" Bars, round, square, flat (per lb.)					—	
" " hexagon (per lb.)					—	
Tin.						
English, ingots, f.o.b.	—			64	0	0
" bars	—			65	0	0
" refined	—			66	0	0
Straits, spot and 3 months respectively	60	5	0	60	2	6
Australian spot, and three months respectively	60	7	6	60	5	0
Banca " (in Holland)	61	12	6	61	15	0
TIN PLATES: Charcoal, best quality per box	0	12	0	0	14	0
" " ordinary	0	10	6	0	11	0
" Coke, best quality	0	9	6	0	10	0
" " ordinary	0	9	0	0	9	3

These prices of tinplates are f.o.b. at Swansea; at Liverpool 6d. per box more.

Iron.						
Pig, G.M.B., f.o.b., Clyde, spot	—			2	1	5
" Scotch pig, No. 1 Gartsherrie	—			2	10	6
" " Coltness	—			2	13	6
" " Clyde	—			2	8	6
" " Govan	—			2	3	6
Bars, Welsh, f.o.b. Wales	—			5	0	0
Plates "	—			6	0	0
Bars, Staffordshire, at works	—			5	2	6
Sheets " "	—			6	7	6
Plates " "	—			6	5	0
Hoops " "	—			5	10	0
Ship plates, Middlesborough	—			4	16	3
STEEL: English spring	—			10	0	0
" " cast	—			42	0	0
" Rails at works, according to section	3	12	6	4	5	0
Lead.						
Spanish or soft foreign	9	10	0	9	11	3
English pig, common	—			9	12	6
" L.B.	—			10	5	0
" sheet	—			10	15	0
" bar lead	—			10	15	0
" pipe	—			11	5	0
" red	—			12	0	0
" white	—			16	5	0
" patent shot	—			14	0	0
Spelter.						
Silesian ordinary brands	13	17	6	14	0	0
" special brands	14	0	0	14	5	0
English Swansea	14	12	6	14	15	0
Sheet Zinc	17	7	6	17	10	0
Antimony.						
Antimony	—			32	0	0
Quicksilver.						
Flasks, 75 lbs. warrants	6	9	0	6	10	0
Manganese.				per unit.		
Ore, c.i.f., U.K. ports 1st quality, 50 per cent. and upwards	0	0	10½	0	0	11⅝
2nd " 47 per cent. to 50 per cent.	0	0	9	0	0	10
3rd " 40 " 47 per cent.	0	0	8	0	0	9
Aluminium.						Per lb.
98-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)				0	1	8
do do (1 ton lots)				0	1	7
Nickel.						
98-99 per cent. guarantee	0	1	9	0	1	8

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bx*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver *R*, Ruby; *S*, Silver; *S-l*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "called up" column of British Mines, signifies that the mine is conducted on "Cost Book" principles: † in the "Head Office" column of African Mines, signifies that the address given is not that of the head office, but of a sub- or transfer office and ‡, following the names of African mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct; we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name.	Closing Price, Feb. 15, 1895	Closing Price, Feb. 8, 1895.	Par.	Latest Dividend	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Blue Hills .....*CT*	2/6 5/-	2/6	*	2/- May, '81	5 15 6	5,353	Cornwall	Camborne.
Botallack .....*T*	—	⅜	*	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea .....*T*	1 1⅛	1⅛	*	2/6 Dec., '93	22 8 5	6,000	Cornwall	Carn Brea.
Cook's Kitchen ..*T*	20/- 30/-	26/-	*	—	35 15 10	4,900	Cornwall	Camborne.
Devon Gawton *CA*	par ¼ pm.	p.¼p.m	1 0	—	0 12 6	25,000	Near Tavistock	8, Finsbury circus.
Devon Gt Cons.*CA*	1⅛ 1¾	1⅜	5 0	3/- Nov. '94	2 0 0	10,240	Devon	8, Finsbury circus.
Dolcoath .....*T*	36 37	39	*	12/6 Apr. '94	9 12 6	4,760	Cornwall	Camborne.
Drakewalls *CTM*	4/- 5/-	1/-	0 5	—	0 2 0	61,856	Cornwall	Dashwood House.
East Pool .....*AT*	4⅛ 5	4½	*	1/6 Sept, '94	0 9 9	6,400	Cornwall	Illogan.
Gawton .....*CA*	—	—	2 10	—	2 7 0	12,000	Devon	20, Great St. Helens.
Great Laxey.....*L*	1¼ 2	1¼	4 0	5/- Apr., '92	4 0 0	15.000	Isle of Man ...	Douglas, Isle of Man.
Green Hurth ...*L*	1/8	1/8	1 0	-/6 June '89	0 19 0	3..,000	Cumberland..	Newcastle.
Halkyn .....*L*	—	—	1 0	2/- Dec. '94	1 0 0	10,000	Flintshire.....	Chester.
Hexworthy .....*T*	—	—	1 0	—	1 0 0	14,634	Devon	6, Queen-street-place
Isle of Man .....*L*	—	—	5 0	1/6 Dec. 94	5 0 0	14,000	Isle of Man ...	Chester.
Killifreth .....*T*	15/- 20/-	17/6	*	1/6 Nov.,'94	5 11 6	6,000	Cornwall	Truro.
Leadhills .....*L*	15/- 20/-	15/-	6 0	3/- Sep. '92	6 0 0	20,000	Lanarkshire..	30, Finsbury-circus.
Levant .....*CT*	4 4¼	4	*	4/- Nov.,'94	11 9 6	2,560	Cornwall	Penzance.
Lovell .....*T*	—	—	*	1/3 Nov.,'91	1 16 7	7,165	Wendron	3, Gt, Queen-st., S.W.
Minera.....*L*	—	—	5 0	5/6 Mar '90	5 0 0	9,000	Denbighshire.	Minera, N. Wales.
Nenthd&Tndie.*LZ*	3/6	3/6	1 0	6 % Feb., '91	0 18 0	48,8 5	Northumberld	Newcastle-on-Tyne.
NewCooksKitn.*TC*	—	—	*	—	10 18 3	4,900	Cornwall	Camborne.
New Minera	—	—	1 0	1/- Oct., '92	1 0 0	30,000	North Wales...	6 Queen-street-place,
Parc .....*LZ*	—	—	1 0	—	1 0 0	5,000	Llanrwst.....	Billiter sq. buildings
Phœnix United *TC*	1/6 2/-	1/6	*	1/- Mar. '90	7 4 6	10,666	Cornwall	Liskeard.
Polberro .....*T*	12/6 17/6	12/6	*	—	3 7 9	18,000	Cornwall	37, Walbrook.
So. Condurrow *TC*	2/6 7/6	5/-	*	3/6 Apr. '93	7 17 6	6,123	Cornwall	98, Great St. Helens
South Croftv *TA*	2/6 7/6	5/-	*	—	17 7 6	6,120	Cornwall	Pool, Cornwall.
S. Frances Untd. *T*	2/6 7/6	2/6	*	—	2 7 6	6,000	Cornwall	Redruth.
Tincroft .....*T*	4½ 5	4½	*	2/- Aug. '94	15 7 6	6,000	Cornwall	Carn Brea.
Weardale .....*L*	8/9	8/9	4 0	1/3 Oct. '90	1 10 0	50,000	Durham.....	3, Lombard-court.
West Frances ...*T*	2/6 7/6	2/6	—	2/6 May,'89	16 4 7	6,144	Cornwall	Camborne.
West Kitty .....*T*	5 5½	5	*	2/- Dec, '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheal Agar ..*TA*	2/6 7/6	2/6	*	2/6 Aug. '88	23 15 2	6,000	Cornwall	Redruth.
Wheal Basset ...*TC*	1¾ 1½	1¾	*	10/- Apr.'88	12 3 0	6,144	Cornwall	Redruth.
Wheal Friendly..*T*	-/6 1/-	-/6	*	—	0 12 9	10,000	Cornwall	110, Cannon-st., E.C.
Wheal Grenville *T*	10⅛ 11⅛	11	*	2/6 Nov. '94	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheal Kitty.....*T*	1/- 3/-	1/-	*	3/- Mar. '88	4 5 6	8,590	Cornwall	Truro.
Wheal Metal &F.*T*	1/- 1/6	⅛	*	—	0 13 9	10,784	Cornwall	14, Broad-street Av.

AUSTRALIAN AND NEW ZEALAND MINES.

Abbotts .....*G*	⅛dis⅛pm	p.⅛pm	1 0	—	0 12 6	100,000	Murchison ..	17, Old Broad st
Achilles Gld Fld.	2/ 3/	2/-	1 0	—	1 0 0	80,307	New Zealand	3, Church Pas, E.C.
Aladdins Lamp *G*	17/6 20/-	⅞	1 0	1/- Dec. '54	1 0 0	100,000	N S Wales ...	4-8, Throg. Avenue.
Assoc. Gold Mines	⅛dis⅛pm	⅛	1 0	—	0 10 0	375,000	Coolgardie.....	Broad Street Avenue
Austin.....*G*	18/9 21/3	1⅛	1 0	—	1 0 0	50,000	W. Australia...	23, College hill, EC
Australasian .....*G*	4/3 4/9	4/-	1 0	-/6 Mar,, '92	1 0 0	210,000	Queensland ..	6, Queen-st, place
Australian .....*C*	—	—	20 0	1/6 July '94	7 7 6	18,315	So. Australia	18, Old Jewry Chbrs
Aus. Bro. Hill Con.	1/3 1/9	1/6	1 0	1/- June, '91	1 0 0	537,138	N. S. Wales ...	Dashwood House.
Baker's Creek ...*G*	1 1¼	1	1 0	1/- Dec. '94	0 17 6	100,000	N. S. Wales ...	Hillgrove, N.S.Wales
Bayley's Reward *G*	10/6 11/6	11/-	1 0	-/4 Dec. 94	1 0 0	480,000	W. Australia...	2, Met. Ex. Buildings
Big Blow .....*G*	¼ ⅛ dis	¼	1 0	—	0 15 0	100,000	W. Australia...	Blomfield Ho., E.C.
Blackett's Claim *G*	8/9 11/3	8/9	1 0	—	1 0 0	60,000	W. Australia..	14, Sherborne ln. E.C.
Blue Spur & G. G.	-/6 1/-	-/6	1 0	—	1 0 0	80,098	New Zealand	6, Gt. St. Helens'
Bonnie Dundee *G*	13/- 14/-	12/6	1 0	—	0 16 6	120,000	Queensland ..	3-5, Gracechurch-st
Brilliant.....*G*	17/6 18/6	18/-	2 0	-/4 Jan. '95	2 0 0	250,000	Queensland ..	Charters Towers.
Brilliant Block...*G*	1¹³⁄₁₆ 1¹⁵⁄₁₆	1¹³⁄₁₆	2 0	-/6 Jan. '95	2 0 0	250,000	Queensland ..	3, Gracechurch-st.
Brilliant, St. Geo.	1⅜ 1¾ xd	1¾	0 10	6d. Feb. '95	0 6 3	72,000	Queensland ..	Charters Towers.
Brit. Brok. Hill *S*	5/- 6/-	5/-	5 0	—	5 0 0	240,000	N. S. Wales ..	Dashwood Ho., E.C.
Broken Hill Prop.	1¹³⁄₁₆ 1¹⁵⁄₁₆	1¹¹⁄₁₆	0 8	1/- Feb. '95	0 8 0	960,000	N. S. Wales ...	Dashwood Ho., E.C.
Brown's Creek ...*G*	1⁹⁄₁₆ 1¹¹⁄₁₆	1⁹⁄₁₆	—	—	—	—	—	—
Cashman Bril.... *G*	⅜ ⅝	⅜	1 0	—	0 15 0	60,000	Coolgardie.....	14, Sherborne ln. E.C
Carrington..... *G*	5/3 5/9	4/-	12/6	—	0 12 6	100,007	Queensland ..	9, Tokenhouse Yard,
Con. G. M. of W. A.	par. ⅛ p.m	pr ⅛pm	1 0	—	0 12 6	90,000	W. Australia..	14, Hill st., Edinboro'
Coolgardie .....*G*	-/9 1/-	-/9	0 2	—	0 0 6	40,000	Coolgardie.....	Winchester House.
Coolgardie(Shriws)	6/9 7/3	6/9	1 0	—	0 5 0	—	—	—
Craven's Cal. ... *G*	3/ 4/	3/-	0 6	-/3 June 94	0 4 8	100,000	Queensland ..	30-1, S. Swithin's-le,
Crown Bayley's. *G*	⅛ ⅛ pm	⅛	1 0	—	0 10 0	80,000	Coolgardie.....	Bishopsgate Ho. E.C.
Croydon King B. *G*	3/- 5/-	3/-	0 5	—	0 5 0	60,000	N. Queensland	Leadenhall Big. E.C.
Cumbrind (New)*G*	3/9 4/3	3/3	1 0	2/6 Dec, '87	1 0 0	184,790	Queensland ..	Blomfield House E.C
DayDawn E.&W.*G*	10/- 11/-	10/-	1 0	-/6 Mar. 93	1 0 0	498,400	Queensland ..	3-5, Gracechurch-st.
Day Dawn P. C. *G*	5/3 5/9	5/3	1 0	-/6 Apr. '92	1 0 0	490,000	Queensland ..	Winchester Ho., E.C
Eaglehawk.....*G*	2/- 2/6	2/	1 0	—	0 19 6	120,000	Victoria..... ..	31, Lombard-street,
Empress Coolge. *G*	¼ ⅛ dis.	¼	1 0	—	0 10 0	90,000	W. Australia..	2, Tokenhouse bldgs
Eng. & Aus.Cop.Co	⅛	⅛	2 0	2½ 1883	1 17 6	70,000	So. Australia	136, Palmerston-bldg
Etheridge .....*G*	-/1½	-/1½	0 5	—	0 5 0	324,290	Queensland ..	6-7, Queen-street-pl.
Frederick the Gt *G*	par. ⅛ pm.	p.⅛pm.	1 0	—	1 0 0	125,000	Victoria.....	St. George's House.
Glenrock .....*G*	1/9 2/3	1/9	1 0	—	1 0 0	225,000	N. Zealand ..	3-5, Queen-st, E.C.
Golconda .....*G*	18/9 21/3	18/9	1 0	—	1 0 0	73,000	W. Australia..	14, Sherborne ln., E.C
Gold Estates.....	1⅛ 1⅜pm	⅝	1 0	—	—	60,000	W. Australia..	—
Great Boulder ...*G*	10/- 11/-	11/	1 0	—	1 0 0	119,380	W. Australia..	3, Gracechurch st.
Great Coolgardie....	¾ ⅞	¾	1 0	—	0 10 0	85,000	Coolgardie.....	3, Budge Row.
Great Fingall Rfs.	2 2¼	2	1 0	—	—	—	—	—
Golden Gate.... *G*	1/6 2/-	1/6	0 10	—	0 10 0	150.000	Queensland..	9, Tokenhouse Yard.
Hampton Lands..	3⅛ 3¼	3⁵⁄₁₆	1 0	10/- Nov, '94	1 0 0	64,075	W. Australia..	1, Whittington Avue
Hampton Plains ..	1⁹⁄₁₆ 1¹¹⁄₁₆	1¹¹⁄₁₆	1 0	—	0 4 0	350,000	W. Australia..	29, 8, Swithin's lane
Hannan's'BrwnHil	1⅝ 1¾	1⅜	1 0	—	—	70,000	W. Australia	Bartholemew House.
Kaboonga .....*G*	2/6 3/-	2/	0 10	—	0 9 9	500,000	Queensland ..	70 71, Bishopsgate st.
Kangarilla .....*S*	2/6 3/6	2/6	1 0	—	1 0 0	88,275	So. Australia	68, Coleman-street.
Kapanga.....*G*	6/- 6/6	5/9	1 0	-/6 Jan. '91	0 19 6	250,000	N. Zealand ..	9, New Broad-street.
Kilkivan.....*G*	—	—	1 0	—	1 0 0	81,392	Queensland ..	4, Coleman-street.
Kinsella .....*G*	19/9 21/3	20/-	1 0	—	1 0 0	80,000	W. Australia..	33, Broad-st. Avenue
Lady Loch.....	¾ ⅞pm.	¾	1 0	—	0 10 0	70,000	Coolgardie.....	—
Lady Mary Amalg.	1⅜ 1½	1⅜	1 0	—	—	46,000	Murchison.....	Blomfield House.
Lindsay .....*G*	par. ⅛ pm.	p⅛pm	1 0	—	0 7 6	65,000	Coolgardie.....	15, Angel Court.
Londonderry..... *G*	6/3 8/9 pm	6/3	1 0	—	1 0 0	467,000	Coolgardie.....	3, Gracechurch-st,
L.& W. Aust. Expl.	1⁹⁄₁₆ 1¹¹⁄₁₆	1⅝	1 0	20 p.c. Dec, '94	1 0 0	100,000	W. Australia..	Broad Street Ho.
Mawson'sRewrd.*G*	20/- 22/6	20/	1 0	—	0 10 0	60,000	W. Australia..	28 & 29.8 Swithin'sln
Mills' Day Dawn*G*	1⁷⁄₁₆ 1⁹⁄₁₆xd	1⁷⁄₁₆	1 0	-/6 Feb, '55	0 15 6	300,000	Queensland .	3, Gracechurch-st.
Mosman .....*G*	4/ 4/6	4/-	1 0	—	1 0 0	58,235	N. S. Wales ..	16, St. Helen's-place.
Mt. Leyshon .....*G*	—	—	1 0	-/6Dec. '90	1 0 0	157,989	Queensland ..	7, Draper's-gardens.
Mountain Maid *G*	2/- 3/-	2/-	0 10	—	0 6 3	56,000	Queensland ..	Leadenhall Bldgs.
Mount Morgan *G*	2¹⁵⁄₁₆ 2⁹⁄₁₆	2⅝	1 0	-/6 Jan. 95	0 17 6	1,000,000	Queensland ..	50, Lime-street.
Mount Zeehan *SL*	-/6 1/-	-/6	1 0	—	1 0 0	193,257	Tasmania	Mansion Ho. Cham.
New Queen .....*G*	6/- 6/6	6/3	1 0	-/6 Apr., '94	0 19 6	158,915	Queensland ..	30, St. Swithin's-la.
Nicol Mines	⅛ ¾pm.	¼	1 0	—	—	80,000	W. Australia..	151, Cannon St. E.C.
N. Q'ld. M.Agency	24/6 25/6	24/6	1 0	10 p.c. July '94	1 0 0	90,000	Queensland ..	10, New Broad Street
Port Phillip	-/3 -/9	-/3	0 5	—	0 5 0	200,000	Victoria	57, Moorgate-st., E.C.
Queen's Bthdy Un	9/6 10/6	9/-	1 0	—	0 12 6	75,000	Victoria	7-8, Gt, Wnchester St.
ScottishAustralian	⅝ ⅞	⅝	1 0	4 4-5d. Nov.'94	1 0 0	200,00	N.S. Wales ..	Winchester Ho. E.C.
Sunburst.....*G*	—	—	0 10	-/6 Mar. '92	0 10 0	150,000	Queensland ..	9, Tokenhouse Yard.
Victoria Associatn.	—	—	1 0	-/3 Feb. '95	1 0 0	144,000	Char. Towers	5, Crosby-square
Victory..... *G*	6/- 7/-	6/6	0 5	-/6 Mar., '94	0 5 0	200,000	Queensland ..	32, Gresham-st., E.C
Waihi.....*G*	6¼ 6½	6½	1 0	1/- Dec, '94	1 0 0	150,000	New Zealand	11, Abchurch-ln. E.C
Wentworth Exten.	3/9 4/3	3/9	0 5	—	0 5 0	178,828	N. S. Wales ..	19, 8. Swithin's Lane
Wentworth Ord.*G*	5/- 6/-	5/-	1 0	—	1 0 0	350,000	N. S. Wales ..	4-6, Throgmort. Av.
Went. Priority...*G*	13/- 15/-	12/-	1 0	2/- Dec '94	1 0 0	150,000	N. S. Wales ..	4-6, Throgmort. Av.
W. Argentine ...*G*	1/6 1/9	1/9	1 0	—	0 19 6	150,000	N. Zealand ..	3-5, Queen-street.
W. Aust. Concesn	1⅛ 2	1⅞	1 0	1/- Jan. '95	1 0 0	17,500	W. Australia..	33, Old Broad st., EC
W. Aus. Exploring	⅜ ½ pm	1⁷⁄₁₆	1 0	—	0 15 0	200,000	W. Australia...	54, Old Broad st., EC
W.Australian G.F.	3⅜ 3½	3¹¹⁄₁₆	1 0	2/6 Dec., 94	1 0 0	65,000	W. Australia..	28-29, 8, Swithin's-ln.
W. Aust. Mining	5/6 6/6	7/-	1 0	—	1 0 0	104,297	W. Australia..	257, Winchester Ho.
W. Mallina ..... *G*	2/- 2/6	2/-	0 5	—	0 3 0	80,000	W. Australia..	Winchester House.
White Feather ...	2½ 2¾	2⁹⁄₁₆	1 0	—	1 0 0	60,000	W. Australia..	28 & 29.8, Swithin's-ln.
Zapopan..... *G*	6/9 7/3	6/9	1 0	—	0 5 0	—	—	70, Bishopsgate-street
Zeehan Montana *S*	—	—	1 0	8d Aug., 94	1 0 0	66,000	Tasmania	11, Queen Victoria st.
Zeehan Montana *S*	—	—	1 0	5d Aug., 94	0 12 6	12,600	Tasmania	11, Queen Victoria st.

EUROPEAN MINES.

Asturias ..... *L*	10/- 15/-	10/-	£ 0	-/6 Oct. '84	£ 0 0	25,000	Spain	8, Queen-street-place
Avala .....*C*	0 ⅛	⅛	1 0	1/- May '93	1 0 0	150,047	Servia.....	4, Tokenho. Bldgs.
Consett Ore ..... *I*	5½	5½	1 0	5/- July '94	1 0 0	55,20	Spain	19, Grey-st., N'castle.
English Cr. Spelter	⅜ ⅝	⅜	1 0	2½ % Aug. '94	1 0 0	84,000	Lombardy	9, Queen-street-place
Fortuna ... . *L*	17/6 22/6	17/6	2 0	1/- Oct. '94	1 0 0	25,000	Spain	6, Queen-street-place
Libiola.....*C*	3¼ 3½	3¼	5 0	2/6 Aug. '94	5 0 0	60,400	Italy	Dashwood Ho., E.C.
Linares .....*L*	3¾ 4	3¾	3 0	5/- Oct, '94	3 0 0	14,998	Spain	6, Queen-street-place
Mason & Barry...*C*	1¾ 2	1¾	5 0	2/- May. '94	5 0 0	185,172	Portugal	87, Cannon-street.
Oscar .....*G*	—	—	5 0	—	0 4 6	117,240	Norway	6A, Austin Friars.
Pestarena .....*G*	5/ 6/	5/-	3 0	—	3 0 0	67,859	Italy	6-7, Queen-street-pl.
Pontgibaud .....*SL*	—	—	20 0	11/6 Dec, '94	20 0 0	14,000	Coueron, Fr...	6-7, Queen-street-pl.
Rio Tinto .....*C*	13 13⅜	13⅜	10 0	4/- Oct., '94	10 0 0	325.000	Spain	30, St. Swithin's-lane
Do. (Mort. Bonds)	104 106	104	100 0	5 % Jan., '95	100 0 0	£1892,740	Spain	30, St. Swithin's-lane
Do. (2nd do.)	102 104	102	100 C	5 % Jan. '95	100 0 0	£1024,860	Spain	30, St. Swithin's-lane
Do. (3rd do.)	101 103	101	100 C	5 p.c. Jan., 95	100 0 0	£587.080	Spain	30, St. Swithin's lane
Stpanji .....*NQ*	8/- 10/-	8/-	1 0	—	0 19 0	95,000	Servia.....	120, Bishopsgt-st, Wnl
Tharsis.....*C Sul*	4⅝ 4⅝	5	2 0	12½ % Mar. '94	2 0 0	625.000	Spain	Glasgow.
West Prus Pre.pref	—	—	10 0	8 % Jan. '95	10 0 0	365	Germany	Walbrook Ho., E.C.
West Prussian Pre.	—	—	10 0	8 % Jan. '95	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	—	—	10 0	8 % Jan. '95	10 0 0	14,050	Germany	Walbrook Ho., E.C.
Wohlfahrt .....*L*	—	—	1 0	3 % Dec. '94	1 0 0	99,834	Prussia	17, Victoria-st., S.W.
Wohlfahrt	—	—	1 0	3 % Dec, '94	0 10 0	9,090	Prussia	17, Victoria-st., S.W.

INDIAN AND ASIATIC MINES.

Name.	Closing Price, Feb 18, 1895	Closing Price, Feb 8, 1895.	Par.	Latest Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Asia Minor Pref. *St.*	—	—	0 10	—	0 10 0	42,430	Asia Minor ...	2, Metal Ex Bldgs.
Do. Ord. ...	—	—	1 0	—	0 2 0	51,584	Asia Minor ...	2, Metal Ex Bldgs.
Balaghat MuzdeG	4/- 4/6	4/	1 0	—	0 19 0	180,000	India	6-7, Queen-street-pl.
Burma Ruby.....*R*	11/6 12/6	13/-	1 0	—	0 17 0	300,000	Burmah	Suffolk House, E C.
ChampionReef...*G*	4 4½	4⅛	1 0	3/- Jan. '95	1 0 0	200,000	India	6-7, Queen-street-pl.
Colar Central ...*G*	-/9 1/3	-/9	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel..... *G*	5/- 6/-	5/-	1 0	—	0 13 9	95,000	India	6-7, Queen-st -place.
DevAla Movar ...*G*	—	—	1 0	—	1 0 0	200,000	India	34, Nicholas-lane
Gemming&Mining	—	—	2 0	—	1 7 6	19,594	Ceylon	183, Gresham House.
GoldFldsMysore*G*	18/- 20/-	19/-	1 0	1/- July '92	1 0 0	220,000	India	6-7, Queen-street pl.
Gold Flds Siam *G*	—	—	1 0	—	1 0 0	150,000	Siam	19, St. Swithin's-lane.
Hyderabad Dec. ..	8⅞ 9⅛	9⅛	10 0	—	10 0 0	115,000	Deccan	16, St. Helen's-place.
Kempinkote GdFd	2/6 3/-	2/9	0 5	—	0 3 6	665,473	India	6-7, Queen-st.-place.
Mysore ..... *G*	2¾ 2⅞	2¾	1 0	1/- Nov, '94	1 0 0	250,000	India	6-7 Queen-street pl.
My. Harnhalli .. *G*	1/6 2/-	2/	1 0	—	0 18 0	100,000	India	2, East India Avenue
Mysore Reefs ...*G*	4/- 5/-	4/6	1 0	—	1 0 0	134,788	India	6-7, Queen-street-pl.
Mysore West(N)*G*	13/- 14/-	13/6	1 0	—	0 19 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynaad *G*	12/- 14/-	12/-	1 0	—	0 19 0	250,000	India	Dashwood Ho., E.C.
Nine Reefs .....*G*	1/9 2/3	3/3	0 10	—	0 10 0	50,000	India	6-7, Queen-street-pl.
Nundydroog.....*G*	1⅞ 2	1⅞	1 0	1/6 Dec. '94	1 0 0	200,000	India	6-7, Queen-street-pl.
Ooregum(Df.O.)*G*	2¹⁵⁄₁₆ 3¹⁄₁₆	2⅞	1 0	2/6 Nov. '94	1 0 0	145,000	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	3¹⁄₁₆ 3⁵⁄₁₆	3½	1 0	2/6 Nov. 94	1 0 0	95,536	India	6-7, Queen-street-pl.
Do. (10 % Pref.).	2¾ 3	2¾	1 0	2/6 Nov, '94	0 5 0	24,464	India	6-7, Queen-street-pl.
Pahang Corpn. .. *T*	7/6 8/6	8/6	1 0	15 % Apr. '89	1 0 0	203,070	Malay Penin.	Blomfield Ho., E.C.
Pahang Kabang *T*	⅛ ⅛	⅛	1 0	—	1 0 0	394,7-0	Malay Penin.	4a, Jeffrey's sq., E.C
S. Aust. Petroleum	1/3 1/9	1/6	1 0	—	0 18 6	108,000	Burmah.....	12, Pancras Ln., E.C.
Yerrakonda .....*G*	3/- 3/6	3/6	0 4	—	0 2 6	—	Mysore	6-7, Queen-street-pl.

NORTH AMERICAN MINES.

Alaska Mexican...*G*	1 1⅛	1	$5	7 1-5d. Nov. 94	$5	160,000	Alaska.....	30, St. Swithin's-ln
Alaska Treadwell*G*	2⅞ 3⅛xd	2⅞	$25	1/6 Jan., '95	$25	200,000	Alaska.....	30, St. Swithin's-ln.
Almada and T .. *S*	-/3 -/6	-/3	2/6	—	0 2 6	351,008	Mexico	6, Queen-street-place
American Belle...*S*	1/- 1/6	1/-	1 0	-/6 Mar. '91	1 0 0	398,890	Colorado	25A. Old Broad-street
Anglo Mexican ...*S*	—	—	5 0	3/- Jan. '90	5 0 0	74,850	Mexico	23, College Hill.
Arizona (Pref.) Cu	10/9 11/-	10/3	4 0	—	4 0 0	158,920	Arizona	74, Geo.-st , Edinbor.
Do. 6⅛ A Deben.	79	—	100 0	—	100 0 0	£135,300	Arizona...	74, Geo.-st., Edinbor.
Do. 7⅞ B Deben.	62	—	100 0	—	100 0 0	£181,300	Arizona	74, Geo. st., Edinbor.
Big Creek ..... *Ay.*	2/6 3/6	2/6	1 0	1/- Dec. '91	1 0 0	50,000	Nevada	2, Pancras-lane, E.C.
California ..... *G*	—	—	0 10	-/6 May 90	0 8 9	129,571	Colorado	St. George's Ho E.C.
Canadian Phos. *P*	—	—	1 0	-/6 Nov.,'90	1 0 0	73,334	Canada	155, Fenchurch-st.
Colorado Boy.....*S*	—	—	1 0	—	1 0 0	112,491	Colorado	Abchurch-chbrs. E.C
Cortez .....*S*	—	—	1 0	3 % Feb.'93	1 0 0	300,000	Nevada	Suffolk House, E.C.
Decatur.....*SL*	—	—	1 0	—	1 0 0	32,500	Colorado	35, Queen Victoria-st.
Do..... (Pref.)	—	—	1 0	—	1 0 0	12,500	Colorado	35, Queen Victoria-st
De Lamar.....*GS*	25/- 26/- xd	25/-	1 0	1/- Jan., '95	1 0 0	400,000	Idaho	6, Draper's-gardens.
Dickens Custer*GS*	1/3 1/9	1/3	1 0	—	0 19 9	420,000	Idaho	Winchester Ho. E.C
Elkhorn .....*S*	9/- 10/-	10/-	1 0	-/9 Dec. '94	1 0 0	175,007	Montana	6, Draper's-gardens.
Emma .....*S*	-/6 -/9	-/6	0 5	—	0 5 0	403,618	Utah	15, Geo-st, Mansn. Ho
Flagstaff.....*S*	1/8 2/-	1/6	1 0	—	0 18 9	240,000	Utah	Dashwood Ho., E.C
Fisk..... *G*	—	—	1 0	6d May, 94	1 0 0	134,000	Colorado	5, Fenchurch st.
Gardfield .....*GS*	—	—	1 0	-/6 Dec. '88	0 19 6	93,185	Nevada	Suffolk House, E C.
Golden Feather *G*	7/6 8/6	7/6	1 0	—	1 0 0	180,000	California ...	8, Stephens Co E C.
Golden Gate .....*G*	3/- 4/-	3/-	1 0	—	0 19 6	79,600	California ...	St. Stephens Co E.C.
Golden Leaf.....*G*	3/- 3/6	3/9	1 0	—	1 0 0	300,259	Montana	8, Draper's Gardens.
Golden Valley...*G*	1/3	1/3	1 0	—	0 19 0	85,507	Colorado	15, Angel Court.
Harqahala..... *G*	5/- 6/-	5/6	1 0	-/6 Oct., '94	1 0 0	300,000	Arizona	6, Draper's Gardens.
Holcomb Valley *G*	2/- 2/6	1/

'THE MINING JOURNAL" SHARE LIST—(Continued).

SOUTH AND CENTRAL AMERICAN MINES—(*Continued*).

Name.	Closing Price, Feb.15,1895	Closing Price, Feb. 8, 1895.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Santa Barbara'...G	—	—	0 10	1/3 Dec. '88	0 10 0	60,000	Brazil.....	Liverpool
Santa Elena .....N	⅞ 1⅛	⅞	5 0	5/- Oct. '94	5 0 0	22,000	Tarapaca	3, Gracechurch-st.
Santa Rita .....N	3¾ 4¼	3¾	5 0	15% Apr., '94	5 0 0	20,000	Chili	DashwoodHouse, E.C
San Sebastian ....N	2⅝ 3⅛	2⅝	5 0	5/- Dec.'94	5 0 0	29,000	Chili	DashwoodHouse, E.C
Segovia .....G	—	—	5 0	—	0 4 0	160,000	Colombia	5, Copthall-buildings
Sierre Pref.....G	—	—	1 0	10% Dec. '94	0 15 0	840	Colombia	23, St. Swithin's ln.
Sierre Ord.....G	—	—	1 0	6% Dec. '94	1 0 0	10,000	Colombia	23, St. Swithin's ln.
Tetuan .....G	—	—	1 0	—	0 19 6	200,000	Colombia	5, Copthall-buildings
Tolima "A" .....S	6½ 7 xd	6½	5 0	10/- Dec., '94	5 0 0	14,000	Colombia	18, Finsbury-circus.
Do. "B" .....S	5½ 6 xd	5½	5 0	10/- Dec., '94	5 0 0	6 000	Colombia	18, Finsbury-circus.
Vic. & Altamira ...	1/3 1/6	1/3	0 5	—	0 5 0	200,000	Venezuela ...	Broad-st. Avenue.
West Indian.....G	—	—	0 5	—	0 5 0	700,000	San Domingo	49, Queen Victoria-st
aruma .....G	—	—	0 5	—	0 5 0	261,422	Ecuador.....	1, Gt. Winchester-st.

AFRICAN MINES.

African Coal	6/6 7/-	6/6	1 0	—	0 16 6	—	—	—
African Gold Con.	8/6 9/6	8/-	0 10	20 p.c. Jan.'95	0 8 0	300,000	—	16, Tokenhouse-yard
Afrikander ..... G	1⅝ 1¹¹⁄₁₆	1¹¹⁄₁₆	1 0	—	1 0 0	40,000	Transvaal	19, St. Swithin's-lan.
Agnes Block..... G	13/6 16/3	13/9	1 0	—	1 0 0	78,507	Transvaal	54, Old Broad-street
Alexandra Estate G	5/- 5/6	5/6	1 0	—	1 0 0	225,000	Witwatersrd.	Warnford Court, EC.
Anglo-French Exp	1⅞ 2	1⅞	5 0	10% Dec. 94	5 0 0	30,000	S. Africa	170, Winchester Ho.
Appantoo ..... G	—	—	1 0	—	1 0 0	77,585	West Coast ..	Dashwood House.
Aurora ..... G	13/- 15/-	13/-	1 0	5% Mar,'93	1 0 0	65,000	Witwatersrd.	8, Old Jewry.†
Balkis Eersteling G	3/9 4/3	4/-	0 10	—	0 9 6	520,000	Transvaal	85, Gracechurch-st.
Balkis Land	3/9 4/3	3/9	0 10	—	0 10 0	520,000	Transvaal	85, Gracechurch-st.
Banket..... G	2/6 3/-	2/9	1 0	—	1 0 0	200,000	Witwatersrd.	Johannesburg.
Bantjes Reef ..... G	2¼ 2¾	1¹¹⁄₁₆	1 0	—	1 0 0	83,000	Witwatersrd.	Warnford-court.,†
Barrett..... G	10/ 11/-	11/	0 10	—	0 9 0	207,496	De Kaap	17, Basinghall-street
Bechuanaland Exp	31/ 32/	32/	1 0	—	1 0 0	200,00	Bechuanaland	19, St. Swithin's-lane.
Block "B" Lang.	16/6 17/	16/	1 0	—	1 0 0	535,000	Witwatersrd.	8, Princes-st. E.C.†
Boevsen Land ..G	1⅜ 1⅝	1⅜	1 0	—	0 11 0	95,000	Transvaal.....	4, Tokenhouse-bldgs
Brit. S. A. Char. ..	42/ 43/-	41/	1 0	—	1 0 0	2,000,000	S. Africa	19, St. Swithin's-lane
Buffelsdoorn ..... G	3⅝ 3¹¹⁄₁₆	3⅝	1 0	—	1 0 0	250,000	Potchefstroom	7, Lothbury.
Bulawayo Synd. ..	⅝ ¾pm	⅝	1 0	—	1 0 0	12,000	Matabeleland	10, Helen's Place.
Cape Asbestos	2¹⁵⁄₁₆ 2¹⁵⁄₁₆	2⅝	1 0	—	1 0 0	50,311	Orange River	17, St. Swithin's-lane
Cape Copper C	1¾ 1¾xd	1¾	2 0	1/3 Dec. '94	2 0 0	300,000	Cape Colony.	9, Queen-street-place.
Do. 6 % Pref. ..	2 2¼	2	2 0	1/3 Dec. '94	2 0 0	45,000	Cape Colony.	9, Queen-street-place.
Cassel Colliery	3¾ 4xd	3¾	1 0	10pc Dec. '94	1 0 0	75,000	—	69, Cannon-street.
Cen. Montrose... G	1/- 2/-	1/-	1 0	—	0 18 6	69,000	Transvaal	15, George st Mn. Ho.
Champ d'Or ..... G	4½ 4¾	4	1 0	—	1 0 0	116,016	Witwatersrd.	8, Old Jewry, E.C.
Champ d'Or Deep G	18/6 19/6	17/6	1 0	—	1 0 0	275,000	Witwatersrd.	Fox st., Johannesbrg
Champ d'Or French	— —	—	1 0	4/- Jan. '95	1 0 0	117,499	Witwatersrd.	8, Old Jewry, E.C.
City and Suburb. G	18¼ 18¾	16¾	1 0	25% Mar. '94	1 0 0	75,000	Witwatersrd.	1, Crosby Square.†
Coetzeestroom ...G	2/6 3/6	2/6	0 5	—	0 5 0	140,000	De Kaap	105, Leadenhall-street
Con. Buitfontein D	27/ 28/-	26/6	1 0	3½% Sept. '94	1 0 0	721,500	Griqualand W	62, Lombard-st.
Con. Deep Levels G	3¾ 4	3¾	1 0	4/- June '94.	1 0 0	187,250	Transvaal	30, St. Swithin's-lane
Con. G. Fields S A.	3¾ 4	3¾	1 0	15% Nov. '94	1 0 0	1,250,00	S. Africa	8 Old Jewry.
Do. 5½% Deben..	107 108	107	5 0	5½ Jan, '95	5 0 0	6 0.000	S. Africa	8, Old Jewry.
Cresus Deep	2¹⁵⁄₁₆ 2¹⁵⁄₁₆	2¹⁵⁄₁₆	1 0	—	1 0 0	250,000	—	1, Draper-gardens
Crown Reef .....G	9½ 10	9½	1 0	25% Nov. '94	1 0 0	180,000	Witwatersrd.	130, Bishopsgt st. Wn†
De Beers Consol. D	20⅛ 20⅜	19⅝	5 0	12/6 Jan. '95	5 0 0	789,791	Transvaal	62, Lombard-street.
Do. 5% 1st Deb....	107⅛ 108⅛	107	100 0	5% Jan. '95	5 0 0	£3,500000	Transvaal	62, Lombard-street.
Do. 5½% Bul Ob.	108⅛ 107½	108	100 0	5½% Oct. '94	5 0 0	£720,100	Transvaal	62, Lombard-street.
Durban Roodept. G	6¾ 7	6¾	1 0	3/- Dec., '94	1 0 0	£125,000	Witwatersrd.	28, Leadenhall-bldgs
Eastleigh ..... G	1¾ 1⅛	1¼	1 0	—	1 0 0	240,000	—	14, Sherborne-lane.
East Rand ..... G	51/6 52/6	49/	1 0	—	1 0 0	570,000	Witwatersrd.	170, Winchester-ho.
Evelyn ..... G	1¹⁵⁄₁₆ ⅞	1¹⁵⁄₁₆	1 0	10% Jan. '89	1 0 0	66,000	Witwatersrd.	28, Old Jewry, E.C.
Exploration	1⅝ ⅝pm	1⅜	1 0	1/- Dec. '94	0 4 0	144,000	S. Africa	30, S. Swithin's-ln.†
Exploring Co.	3⅞ 4⅛	6¾	1 0	25/- Feb. '94	1 0 0	69,350	S. Africa	19, S. Swithin's-ln.
Ferreira ..... G	15¼ 15⅜	14⅜	1 0	50% Dec. '94	1 0 0	45,000	Witwatersrd.	120, Bishopsgt st. Wn†
Forbes Reef (New) G	3/6 4/6	3/6	1 0	—	0 19 0	185,000	De Kaap	45-6, Leadenhall-st.
F. Johnson & Co....	18/ 19/	17/	1 0	—	1 0 0	200,000	Mashonaland	8, Old Jewry.
Geldenhuis Deep G	6¾ 7	6¼	1 0	—	1 0 0	265,000	Transvaal	30, St. Swithin's-lane.
Geldenhuis Est. G	5¾ 6	5¾	1 0	10% Oct. '94	1 0 0	187,500	Witwatersrd.	120, Bishopsgt st. Wn†
Do. Main Reef	17/ 18/	17/	1 0	—	1 0 0	150,000	Witwatersrd.	Warnford-court, E.C.†
Geldenhuis South.	9/- 10/-	10/6	1 0	—	— —	—	Witwatersrd.	
George and May G	18/- 19/-	18/-	1 0	—	— —	112,750	Witwatersrd.	Warnford Court, E.C
George Goch .. G	2¹¹⁄₁₆ 2¹³⁄₁₆	2¹¹⁄₁₆	1 0	—	1 0 0	100,000	Witwatersrd.	Johannesburg.
Ginsberg	17/ 18/	17/6	1 0	—	1 0 0	130,000	Drietfontein	Warnford Court, E.C.†
Glencairn .....G	3¹⁵⁄₁₆ 3¹¹⁄₁₆	3¼	1 0	7½pc Dec. 94	1 0 0	200,000	Witwatersrd	2, Drapers-gardens.
Gold Estates T.. G	3/6 4/6	3/6	1 0	15% Dec.'89	0 10 0	130,000	Transvaal	48, Queen Victoria-st
Gld. Fls. Deep...G	3¾ 4	3¹³⁄₁₆	1 0	—	1 0 0	600,000	S. Africa	8, Old Jewry.
G. F. of Mashonid.	12/6 15/-	12/6	1 0	—	1 0 0	200,000	Mashonaland	19, St. Swithin's ln.
G.F.Tierrad' Fuego	3/9 4/3	2/9	0 5	—	0 4 0	400,000	Mozambique..	2, Tokenhouse Bldgs.
Grahamstown . G	17/- 18/-	18/-	1 0	—	1 0 0	150,000	Witwatersrd.	14, Throgm rton-st.
Graskop ..... G	1/9 2/3	1/9	0 5	7½% Mar. '93.	0 5 0	400,000	Lydenburg ...	85, Gracechurch-st.
Griqualand W.... D	7¾ 7¾	7¼	10 0	2 % Sept. '94	10 0 0	105,700	Transvaal	62, Lombard-street
Guy Fawkes..... G	7/- 8/	8/-	0 10	—	0 8 0	24,000	Manica	Broad-st. Avenue
Harmony (Pref) G	13/6 14/6	12/6	1 0	—	1 0 0	260,000	—	79¼, Gracechurch-st.
Henry Nourse ...G	5⅞ 6¼	5¼	1 0	—	1 0 0	100,000	De Kaap	Warnford-court.
Jew's Reef ..... G	8/6 7/6	8/6	1 0	—	1 0 0	57,464	De Kaap	21, Mincing Lane
Johannesburg G P	3/6 4/6	3/6	1 0	—	1 0 0	99,537	Nr. Johannesbg	31, Lombard st., E.C.
Johannesburg Pur	3¼ 3¾	3½	1 0	12½% Nov.,'93	1 0 0	2 ,000	Witwatersrd.	Johannesburg.
Jubilee ..... G	9½ 9¾	8½	1 0	30% Dec. '94	1 0 0	30,000	Witwatersrd.	8, Old Jewry.†
Jumpers ..... G	6 6¼	5¼	1 0	25% Dec. '94	1 0 0	100,000	Witwatersrd.	123, Bishopsgt st. Wn†
Kimberley ..... D	per ½pm per ½pm	—	1 0	—	0 10 0	98,672	Kimberley ...	13, Finsbury circus.
Kimberley Rdpt....	19⅛ 11⅛	19⅛	1 0	—	1 0 0	125,000	Kimberley ...	2, Drapers-gardens.
Koffyfontein..... D	15⅛ 11⅛	15⅛	1 0	—	0 5 0	50,000	Jacobsdaal ...	4, Bishopsgate street
Langlaagte Est. G	4¼ 4¾	4¾	5 0	2/- Dec. '94	1 0 0	467,000	Witwatersrd.	59, Holborn Viaduct;
Do. Royal	4¼ 4¾	4¾	1 0	5% Sept. '93	1 0 0	100,000	Witwatersrd.	2, Drapers-gardens†

AFRICAN MINES—(*Continued*)

Name.	Closing Price, Feb 15,1895	Closing Price, Feb. 8, 1895.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Lisbon-Berlyn ...G	4/9 5/3	4/6	2/6	—	0 2 6	889.233	Lydenburg ...	110, Cannon-street.
Lionsdale	8/6 9/6	8/6	1 0	—	—	—	—	85, Gracechurch-st.
London & S. A. Ex.	10 10½	10¼	0 10	25 pe Dec. '94	0 10 0	100,000	S. Africa	19, Finsbury-circus.
Luipaards Vlei Est.	13/6 14/5	13/-	1 0	6% Mar. '90	1 0 0	319,003	Witwatersrd.	Warnford-court.†
Main Reef (New) G	13/6 14/6	14/-	1 0	—	0 10 0	300,000	Witwatersrd.	8, Old Jewry.
Mashon. Agency...	1⅝ 1¹¹⁄₁₆	1¾	1 0	—	1 0 0	100,000	Mashonaland	8, Old Jewry, E.C.
Massi Kessi	10/6 11/6	11/	0 10	—	—	100000	—	Broad Street Avenue
May Con. (New) G	2⅝ 2¹⁵⁄₁₆	2¾	1 0	—	1 0 0	430,000	Witwatersrd.	4, Lothbury.†
Metropolitan (N) G	1¹¹⁄₁₆ 1¹³⁄₁₆	1⅝	1 0	—	1 0 0	75,000	Witwatersrd.	1, Crosby Square.†
Meyer & Charl....G	6½ 6¾	6¼	1 0	30% Dec.,'94	1 0 0	71,687	Witwatersrd.	Warnford-court.†
Mines Trust	— —	⅝	1 0	3% May '94	1 0 0	82,774	So. Africa	130, Winchester Ho.
Modderfontein . G	9 9¼	8½	1 0	—	1 0 0	200,000	Witwatersrd.	Warnford-court.†
Montrose..... G	¾ ⅞	⅝	1 0	3/- Feb, '90	1 0 0	70,000	De Kaap	65, New Broad-street
Moodies G.&E....G	10/6 11/6	10/6	1 0	-/4 May '90	1 0 0	240,000	De Kaap	8, Old Jewry.†
Mozambique.....	21/6 22/6	21/6	1 0	—	1 0 0	400,000	S. E. Africa ...	Broad-street House,
Namaqua C	1⅝ 1¹⁵⁄₁₆	16/3	2 0	2/6 July '91	2 0 0	194,351	Namaqualand.	34, Leadenhall-bldg.
New Aurora West G	14/- 15/-	14/-	1 0	5% Mar., '93	— —	30,000	Witwatersrd	1, Crosby Square
N. Belgian Land...	4/- 5/-	4/6	1 0	—	0 17 0	167,362	Waterberg ...	53, Cornhill.
New Black Reef ...	7/- 8/-	8/6	1 0	—	1 0 0	76,000	Witwatersrd.	9, King William st
New Chimes..... G	2¾ 2⅞	2¾	1 0	5% Oct., '94	1 0 0	70,000	Witwatersrd.	8, Old Jewry, E.C.
New Clewer Estate	1¹⁵⁄₁₆ 1¹⁵⁄₁₆	1½	1 0	10% Jan. '95	1 0 0	100,000	Lydenburg ...	120, Bishopsgt st. Wn
New Crœsus..... G	2¹⁵⁄₁₆ 2¹⁵⁄₁₆	2¹⁵⁄₁₆	1 0	5 % Aug. '92	1 0 0	195,000	Langlaagte ..	4, Bishopsgt.-st. Wt.
New Edwin Brav	3/- 4/-	3/-	7 0	—	7 0 0	65,000	De Kaap	23, College Hill
New Gordon..... D	4/ 5/	4/	1 0	5% Dec. '89	1 0 0	560,250	Griqualand ...	110, Cannon-street.
New Heriot .....G	8¾ 9	8	1 0	20 p c Dec. 94	1 0 0	195,000	Witwatersrd.	1, Crosby Square.†
New Jagersf. ...D	13¾ 13½	17⅜	10 0	1½ Nov., '94	10 0 0	100,000	Transvaal	5, Copthall-buildings
N. Kleinfontein G	3⅞ 4	3¾	1 0	12½pe Dec,'94	1 0 0	150,000	Witwatersrd.	8, Old Jewry.
New Klerksdorp ..	6/ 6/6	5/	0 10	—	0 8 0	—	Transvaal	110, Cannon-street.
New Louis D'Or.. G	2/9 3/3	3	1 0	—	1 0 0	100,000	Witwatersrd.	53, New Broad-stree
New Primrose ...G	5⅞ 6⅛	5¾	1 0	20% Dec. '94	1 0 0	230,000	Witwatersrd.	2, Draper's-gardens.
New Rand.....	par ⅛ pm.	d1⅛ pm	1 0	—	1 0 0	110,000	—	Bartholemew-house,
New Rietfontein G	2½ 2¾	2¾	1 0	—	1 0 0	160,000	Witwatersrd.	Warnford-st., E.C.
New S. Augustine D	8/ 9/	4/	1 0	—	0 19 3	234,583	Griqualand W	30-1, St. Swithin's-la
New Salisbury ...G	3½ 3⅝	3	0 10	—	1 0 0	93,000	Witwatersrd.	1, Crosby-square.†
New Spes Bona.. G	33/ 34/	31/6	1 0	—	0 14 0	113,801	Witwatersrd.	24, N. John-st., L'pl
N. Ophir Concess.	2/8 3/6	3/-	1 0	—	0 18 6	111,857	E. Coast Africa	31, Lombard-street.
New Virginia ...G	4/3 4/9	4/6	0 10	—	0 10 0	48,135	Transvaal	26, Budge-row, E.C.
Nigel ..... G	5⅜ 5½	4⅞	1 0	10% Dec. '94	1 0 0	160,000	Witwatersrd.	1, Crosby-square.
Nourse Deep.....	4½ 4¾	4¼	1 0	—	1 0 0	375,000	—	120, Bishopgt.-st., Wn.
Nyassa (Bearer) ...	17/6 22/6	17/6	1 0	—	1 0 0	—	Mozambique	Bartholemew House
Oceana	2½ 2¾	2	1 0	25/- Nov. '89	1 0 0	326,000	Transvaal	4, Sun Court, h C
Oceana Developmnt	5⅛ 7⅛ pm	⅛	1 0	—	0 7 6	50,000	Transvaal	4 Sun Court, E.C
Orange F.S.E. ...D	4 4½	4	1 0	1/- Sept., '94	1 0 0	284,000	Orange F. State	10, Moorgate-street.
Orion..... G	3¼ 3½	3	1 0	25% Jan. '95	1 0 0	30,000	Witwatersrd.	8, Old Jewry.
Otto's Kopje..... D	5/9 6/3	6/	1 0	—	1 0 0	437,888	Kimberley ...	110, Cannon-st., E.C.
Paarl Central ... G	24/6 25/6	24/-	1 0	—	1 0 0	138,750	Transvaal	120, Bishopsgt st. Wn†
Pardy's Mozambq.	2¼ 2⅝	1¹¹⁄₁₆	0 10	1/- Dec. 94	0 10 0	13,700	S. E. Africa...	Broad St. Avenue.
Pigg's Peak, New G	7/6 8/6	7/6	1 0	—	0 17 0	230,326	Swaziland ...	6, Queen-street-place
Potchefstroom... G	6/6 7/6	5/6	1 0	—	1 0 0	161,000	Potchefstroom	19, Bury-st., E.C.
President Land ..	5/- 6/-	5/-	1 0	—	1 0 0	193,325	Transvaal	17, Basinghall Street
Princess Estate G	1⅞ 2	1¹¹⁄₁₆	1 0	—	1 0 0	72,046	Witwatersrd.	33, Cornhill, E.C.
Randfontein .....G	23/ 24/	22/	1 0	—	1 0 0	1,916,500	Witwatersrd.	59, Holborn Viaduct.*
Rand Mines ..... G	20¾ 21¼	19¾	1 0	—	1 0 0	332,708	Witwatersrd.	120, Bishopsgt st. Wn†
Read's Drift .....D	15/- 17/6	15/-	1 0	—	1 0 0	5',000	Transvaal	19, Finsbury circus.
Robinson ..... G	7⅝ 7⅞ xd	7⅜	5 0	5% Dec. '94	5 0 0	542,750	Transvaal	28, Austin Friars, E.C
Roodepoort Deep	2¾ 2⅛	2¹⁵⁄₁₆	1 0	—	1 0 0	110,000	Witwatersrd.	8, Old Jewry, E.C.
Roodepoort Un. G	4¼ 4⅛	4⅛	1 0	10p.c. Dec. '94	1 0 0	100,000	Witwatersrd.	Warnford-court.†
Sheba	27/- 28/-	30/-	1 0	1/- Sept. '94	1 0 0	614,450	Lydenburg ..	85, Gracechurch-st.
Silati .....G	9/6 9/6	9/	1 0	—	0 17 6	625,000	Zoutpansberg.	4, Sun Court, E.C.
Simmer & Jack...G	11⅞ 12⅛	11¼	1 0	10% Jan. '95	1 0 0	85,000	Witwatersrd.	8, Old Jewry.
S. A. Gold Trust ...	3¼ 3½	3½	1 0	6/6 Jan. '95	1 0 0	220,000	South Africa..	8, Old Jewry.
S. A. Trust & Fin.	12/- 13/-	11/3	1 0	-/9 May 93	0 18 0	413,386	—	1, Crosby Square.
Southern Land.....	5/- 6/-	5/-	1 0	—	0 15 0	80,000	{ Griqld. W. &	19, St. Swithin's-ln.
Southern Land.....	9/- 11/-	9/	1 0	—	1 0 0	20,000	{ Brit. Bech.	19, St. Swithin's-ln.
South West Rand ..	1⅜ 1⅝	1¼	1 0	—	— —	—	—	—
Spitzkop (New) G	14/- 15/-	14/-	1 0	—	0 19 6	99,070	Lydenburg ...	15, Bishopsgt-st, Wt.
Stanhope ..... G	2½ 2¾	2	1 0	20% Jan. '95	1 0 0	34,000	Witwatersrd.	1, Crosby Square.†
Sutherland R. ...G	23/- 24/-	22/	1 0	—	0 19 6	220,000	Zoutpansberg	Dashwood Ho.
Teutonia ..... G	1 1¼	1	1 0	—	1 0 0	96,000	Witwatersrd.	8, Old Jewry.
Thistle Reef ..... G	-/3 -/9	-/3	0 5	—	0 4 0	150,000	Barberton	15, Angel-court, E C
Trans. Coal Trust...	36/6 37/6	39/	1 0	1/- Sept. '94	1 0 0	439,965	Witwatersrd.	Broad-st. House, E.
Trans. Est. & Dev.	16/ 17/	17/6	1 0	—	1 0 0	285,700	Transvaal	76, Old Broad-st. E.C.
Trans. Gold Exp. G	3⅛ 3⅜	3¼	1 0	1/- Dec. '94	1 0 0	250,000	Transvaal	Suffolk House, E.C.
Trans. Land.....	7/- 8/-	7/	1 0	—	1 0 0	79,915	Transvaal	Suffolk House, E.C.
Trans. Land.....	3/6 4/6	3/6	1 0	—	0 15 0	169,999	Transvaal	33, Cornhill.
Treasury.....	— —	—	1 0	12½% Sep.'91	1 0 0	26,000	Witwatersrd.	Johannesburg.
Turffontein Est. ..	— —	—	1 0	2½ Nov. '94	1 0 0	47,007	So. Africa	130, Winchester Ho.
Un. Ivy Reef.....G	18/9 21/3	19/9	1 0	2½ Jan. '94	1 0 0	45,000	Transvaal	110, Cannon-street
U. Langlaagte(N) G	2¼ 2⅜	2	1 0	—	1 0 0	100,000	Witwatersrd.	23, St. Swithin's-ln.
United Pioneer.....	21/5 23/5	22/6	1 0	—	1 0 0	75,000	—	—
Van Ryn ..... G	4⅝ 4⅞	4	1 0	—	1 0 0	98,810	Witwatersrd.	1, Crosby-square.†
Village Main Reef	5 5¼	4⅝	1 0	—	1 0 0	132,00	Witwatersrd.	8, Old Jewry.
Wassau ..... G	— —	—	1 0	—	1 0 0	150,000	Gold Coast ...	147, Cannon-street.
Wemmer .....G	8⅝ 8¾	7¼	1 0	10% Nov. '91	1 0 0	85,000	Witwatersrd.	19, Bury-street,†
Willoughby's Con.	1¹⁵⁄₁₆ 1¹⁵⁄₁₆	1⅝	1 0	—	1 0 0	700,000	Mashonaland	3, Copthall-bldgs.
Witwatersrand G	3¼ 3⅜	3¼	1 0	—	1 0 0	250,000	Witwatersrd.	19, Bury-st., E.C.
Wolhuter .....G	5¾ 6	5¾	1 0	10 p c Apr., '94	1 0 0	120,000	Witwatersrd.	Warnford-court.†
Wolverand.....G	9¹⁵⁄₁₆ 9¹⁵⁄₁₆	9¹⁵⁄₁₆	1 0	2/- Apr., '94	1 0 0	18,750	Transvaal	5, Copthall-buildings
Wolverand.....G	— —	—	1 0	—	0 18 0	39,021	Transvaal	5, Copthall buildings
Worcester .....G	4 4¼xd	4	1 0	20% Jan. '95	1 0 0	90,727	Witwatersrd.	8, Old Jewry.†
Zambesia Explora.	2¾ 2⅞	2¾	1 0	—	1 0 0	45,000	Transvaal	15, George-st., E.C.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of February 14 (4 o'clock) as follows:—We have had a quiet market this week, and prices on the whole have been easier. There is nothing scarcely doing to-day. Following are quotations:—Blue Hills, ⅛ to ¼; Carn Brea, 1 to 1½; Cook's Kitchen, 1 to 1½; Dolcoath, 35½ to 36½; East Pool, 4⅜ to 5; Killifreth, 14s. to 16s.; South Condurrow, ⅛ to ¼; South Crofty, ⅛ to ⅜; South Wheal Frances, ⅛ to ⅜; Tincroft, 4½ to 5; West Frances, ⅛ to ¼; West Kitty, 5 to 5½; Wheal Agar, ⅛ to ⅜; Wheal Basset, ½ to 1; Wheal Grenville, 11 to 11½; Wheal Kitty (St. Agnes), ⅛ to ¼; Polberro, ⅜ to 1.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (February 14) as follows:—The mining market continues dull and neglected on tin again receding, and without some permanent advance prices will not improve. The sale of ores on Tuesday showed a corresponding decline of £1 per ton on the last. Closing prices:—Carn Brea, 1⅛ to 1⅜; Cook's Kitchen, 1 to 1½; Devon Consols, 1⅜ to 1⅝; Dolcoath, 36⅛ to 37; East Pool, 4¼ to 4⅜; Killifreth, 16s. to 17s. 6d.; South Crofty, 6s. to 7s. 6d.; Tincroft, 4½ to 4⅝; Wheal Basset, ⅜ to 1; Wheal Grenville, 10⅜ to 11.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of Thursday, February 14:—The Cornish Share Market has continued in a dull and lifeless state during the past week, and the amount of business has been small. Dolcoaths and East Pools and Tincrofts have been most dealt in, East Pools showing rather more firmness. Most other shares neglected. Quotations herewith:—Blue Hills, ⅛ to ¼; Carn Brea, 1 to 1½; Cook's Kitchen, 1 to 1½; Dolcoath, 36 to 37; East Pool, 4⅜ to 5; Killifreth, 16s. to 18s.; Polberro, ⅜ to ½; South Condurrow, ⅛ to ¼; South Crofty, ⅛ to ¼; Tincroft, 4½ to 5; West Frances, ⅛ to ¼; West Kitty, 5 to 5½; Wheal Agar, ⅛ to ¼; Wheal Basset, 1¼ to 1⅜; Wheal Grenville, 10⅞ to 11⅛; Wheal Kitty, ⅛ to ¼. Tin, £60⅜.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write February 14th (noon):—The exigencies of the settlement have produced some pretty wide fluctuations in most departments of the market, and as the general balance of change for the week gives little or no idea of the inner movements, daily details will again have to be resorted to. Generally, however, we may say that home rails, as compared with a week ago, show very irregular movements, with advances as regards amount preponderating over declines. The market for things on the other side of the Atlantic, though at times good, shows declines very general, and all but without redeeming advance in any concern. Canadians are specially weak, figures for all their prior issues being very distinctly lower. Excepting for one or two classes, the changes in Miscellaneous groups are mostly better, though not without contradictions in most of the sections. Friday last did not bring out much movement in either home rails or Americans, though there was some little stir on transactions in the last-named, and Canadian Grand trunk issues were flat, owing to weeding-out of weak holders. Mexican issues enquired for. There was not much done on Saturday. Home rails were easier, with Brighton A specially so, losing nearly 1 per cent. Americans began badly, but were better at the close. In Canadians, Trunk series were again flat, and they remained so up to the finish. Mexicans held ground. Monday (as usual, just on the eve of account day, and especially so under later conditions) found markets weak all round. Some further throwing overboard of Trunks brought lower figures again, but there was better absorption manifest, hence prices did not run down as they had done previously—otherwise markets were weak throughout, and some comparatively very low prices were marked. On Tuesday, the first operation towards the settlement required about all the attention that could be given during business hours, and what new business was reported was chiefly at rather easier prices. In Canadians, the Pacific traffic being such a large decrease, brought their shares down close on $3. Grand Trunk issues momentarily seemed stronger, but gave way to the surrounding depression. Mexican rails neglected. Yesterday, without explained cause, save perhaps a feeling that the fright of the preceeding few days had been too severe, witnessed a general recovery, both in tone and actual quotations. Home rails showed only a desultory record of transactions, but prices mended in several instances, with at the same time one or two changes of a contrary nature. Americans quiet, but a little higher on the whole. In Canadians, Pacifics were better about 3/4.

3s. 9d.; Idaho, 3s. 6d.; Johannesburg Consolidated, 55s.; Klerksdorp, 6s.; Knight's, 63s. 3d.; Kaboonga, 2s. 9d.; Lisbon, 5s.; Langlaagte United, 46s. 3d.; Luipaard's Vlei, 13s. 9d.; Londonderry, 7s. prem.; Mallina, 21s. 3d.; North Sheba, 8s. 3d.; Oceana, 42s. 6d; Orion, 67s. 6d.; Otto's Kopje, 6s. 3d.; Orita, 2s.; Paarl Central, 24s. 6d.; Pigg's Peak, 7s. 9d.; Roodepoort Deep, 44s. 6d.; Randfontein, 23s.; South African Trust and Finance, 12s. 3d.; Sunburst, 2s. 6d.; St. Augustine, 6s.; Sam's Wealth of Nations, 6s. 3d; Springdale, 2s. 6d.; Sutherland Reef, 24s; Tolima A, 6¾; Victoria and Altamira, 1s. 9d,; Willoughby Consols, 22s.; and Zapopan, 7s.

In shares of miscellaneous companies the principal dealings have been in oil companies' shares, which are generally higher on the agreement between the Scotch companies and the American company being finally concluded. Broxburn, Pumpherston, and Young's Oil have all advanced, the last to 31s. Lawes' Chemical are at 7½.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of Feb. 14:—During the greater part of the past week markets were very weak and dull, but within the last two days a much better feeling has prevailed, and a recovery in railway stocks has been witnessed, so that the leading Scottish railway stocks show little change. In Canadians the fall was very heavy, and only a partial recovery has taken place. In Banks, British Linen has fallen from 380 to 378, Clydesdale from 19½ to 18½, ex div. Union have improved from 21⅝ to 21 15-16; In insurance shares, Commercial Union have improved from 35½ to 36½, Standard Life from 64 to 64½, National Guarantee from 77s. to 80s., Scottish Life from 35s. to 35s. 9d. British and Foreign Marine have receded from 24 5-16 to 24 1-16, Liverpool, London, and Globe from 48¾ to 48½, North British and Mercantile from 40⅝ to 40¼. Coal shares in demand. Cowdenheath have improved from 14⅜ to 15, Fife from 14½ to 15, Lothian Preference from 8½ to 9. Broxburn Oil have advanced from 9 7-16 to £9¾, Delmeny from 14½ to 15, Pumpherston from 6 3-16 to 6⅝, Young's from 28s. to 31s. 3d. Distillers, 1s. 3d., lower at 17.

CORRESPONDENCE.

*** We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.*

THE SOUTH AFRICAN TRUST AND FINANCE COMPANY, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—I beg that you will allow me space for a brief personal explanation, with regard to the report of the committee of investigation, which has been issued to the shareholders.

Upon the general conclusions arrived at by the committee it is not now necessary for one to say anything, in view of the proposed extinction of the company, but out of respect for those who have supported me in the matter, I should state that the committee never allowed me to appear before them, in order to establish the charges made against the past management of the company, which were the main object of investigation, though I applied to be examined, and attended for that purpose at the request of their Chairman.—I am, Sir, yours faithfully,

W. COTTON.

28, *Ampthill-square, N.W., February 11th*, 1895.

NEW ISSUE.

THE TAMWORTH GOLD MINING COMPANY (LIMITED).

The capital of this company is £85,000 in 85,000 shares of £1 each. According to the prospectus, "this company has been formed to purchase as a going concern and thoroughly develop the "Hanging Rock Gold Mine," known also as "Isaacsohn's and Thompson's Mine." The property comprises 16 acres, situated about 3 miles from Nundle, New South Wales, and 40 miles from Tamworth, one of the most important towns on the main northern line of railway, connecting Sydney with Brisbane. The mine, as appears from Professor Campbell's report, has been worked for several years in a primitive manner by the owners, both working men, and the ore has had to be carted about 10 miles to an old crushing battery to be treated; but notwithstanding these advantages the gold recovered has averaged about 5½ ounces to the ton of ore, 388 tons having yielded 2102 ounces of gold which, sold at the rate of £3 17s. 10½d. per ounce, realised £8146. A few months ago the managing partner, Mr. Thompson, one of the two owners, died suddenly. Owing entirely to the difficulty carrying on the mine to the satisfaction of his representatives, a with the object of providing working capital for the proper development of the property, it has been sold to this company. The title is a Crown lease direct from the Government. There is an ample supply of water power at a sufficient elevation, easily available for driving a battery for crushing purposes, and there is an abundance of timber on the property, so that mining operations can be carried on at a minimum of expense."

REPORTS FROM THE MINES.

BRITISH MINES.

DEVON GREAT CONSOLS.—William Clemo, February 14: In the 148 fathom level east the lode is 4 feet wide, and is promising improvement. The water is being gradually drained, and is now down 48 feet below the 148 fathom level. The weather continues extremely severe, and we have great difficulty in keeping our large wheels at work throughout the mines. The stopes continue to yield their usual quantities of copper and mundic ores.

LEADHILLS.—W. H. Paull, February 11: Brown's Vein. Fair progress is being made in driving the 160 fathom level north of Jeffrey's shaft on vein 4 feet wide, showing a mixture of spar, but containing no ore at present. Good progress is being made in driving same level south of Wilson's shaft, and vein more promising of late. In stope over this level, south of Jeffrey's shaft, the vein yields 20 cwts. of ore per fathom. Nos. 2, 3, and 4 stopes over the 145 fathom level, north of Jeffrey's shaft, are worth respectively 30, 25, and 25 cwts. of ore per fathom. In the 115 driving south of old stope, above the 130 fathom level, the vein has improved, and will now produce 30 cwts. of ore per fathom. No change of note in the same level going north of Jeffrey's shaft, or in the 100 and 85 fathom levels south of Wilson's shaft. In the crosscut east at the 100 fathom level, south of Wilson's shaft, the ground continued much the same, and a fair progress is now being made there. All the other stopes are producing about their usual quantities of ore. At Gripp's adit going south, Sarrowcole vein continues of a promising character, but as yet producing no ore to value. Owing to the very severe snowstorms during the past week we have been able to do but very little in the dressing department; however, have paid attention, and made some necessary repairs to the machinery there To-day, the weather being milder, though freezing hard, we are clearing snow from tramway roads to dressing floors, &c., hoping to commence crushing to-morrow The Abington road was opened on Saturday afternoon.

POLBERRO.—February 12: The engine shaft is sink 12 fathoms 2 feet below the 26, having been sunk 2 fathoms 2 feet during the past fortnight. The lode is standing to the south at present. We are carrying the shaft down by lines from the bottom of the downright, so that we may be for some fathoms sinking north of the lode. There are, however, branches containing tin in the shaft, and the latest parcels from the bottom yield a few pounds tin to the ton. This tin, of course, comes from the branches. We regard this as being very promising as we had similar ground in the crosscut above before we got into the productive ground recently driven through. The 26 on Chappel's downright lode is driven about 4 fathoms west of crosscut. This drivage for the whole length will average 50 lbs. tin per ton, and the lode in the present end is of the same value. We shall now suspend this end in order to commence sinking on Chappel's downright so as to communicate with the shaft. The 26 crosscut north still continues to look well, and yields 42 lbs. tin to the ton. The rise above the 26 east on Pink lode is worth £7 per fathom. There is no other change to report.—(Signed) Charles Thomas, John Harper.

PRINCE OF WALES (East Cornwall Tin Mining Syndicate).—S. Roberts, James Pyne: The crosscut north at the 193 fathom level is being pushed on as rapidly as possible, but the ground is still very hard for driving, and is composed of killas, mixed with spar and capel. The crosscut at the 180 does not appear to be clear of the slide. There is every indication of more of it being ahead.

SOUTH CONDURROW.—We have cut into the flat lode about 3 feet in the bottom of Marshall's shaft, but it is inconvenient working till we have cut a plat, which the shaftesmen are now engaged in doing. The lode in the 167 end west is opening out larger and is worth £8 per fathom. We have been rising the back of the midway level in a lode worth £10 per fathom, but it is cut off at the head of the rise by a fault; the lode is thrown down, and we consider that we have just intersected the lode to the north of this fault, at all events, we have partially drained the winze below the 153. We hope to communicate this rise with the winze in about a week. When this is done it will open out ground for stoping, and give good ventilation. The stope in the back of the 153 is worth £12 per fathom.—(Signed) Wm. Rich, Wm. Thomas, Fred. Rich

WEARDALE.—Report on Weardale Company's mines for week ending February 16:—Groverake, Adamson's drift west, Armstrong's old rise has now been made good, and the men will now start driving the drift west.—Boltsburn. Crosscut south from old rise above Watt's level still flatty looking; no ore to save. Total length of crosscut 7 fathoms. East stope in north flat from Watt's level worth 38 cwts. per fathom. West stope worth 38 cwts. per fathom. South flat stopes worth 36, 40, 36, 28, 30, 32, and 22 cwts. per fathom.—Greenlaws, Nattrass Gill drift. Stopes worth 16 and 24 cwts. per fathom.—Watson's drift. Vein improved, better to drive, worth 8 cwts. per fathom.—Lowe's drift. Stopes worth 16 and 12 cwts. per fathom.—Lee's sump. Vein going east not so good for ore. Stope worth 24 cwts. per fathom.—Sedling. Driving 64 level east. Vein poorer, worth 8 cwts. per fathom. Driving 64 level west. Vein in plate 2½ feet wide, looking better, worth 8 cwts. per fathom. Stope in 64 level east worth 14 cwts. per fathom. Opening old shaft above 56 level, the crosscut south from sump head has been cleaned out to far side of drift. Drift crushed, vein about 3 feet wide, of good spar mixed with little ore, but too poor to work at present. Ore raised for the week 39 tons. The directors have decided to suspend all work as far as possible during the continuance of the present frost.

WEST KITTY.—The 108 fathom level is worth £6 per fathom, the 94 fathom level west is worth £7 per fathom, the 84 fathom level west is worth £10, the 60 end east south of slide is worth £10, the 60 end west south of slide is worth £14, the 50 end east is worth £7, the 50 end west is worth £7. We are engaged in fixing an air machine to better ventilate these ends, and hope to complete it in a few days. Our stopes and tribute pitches continue to yield the usual quantity of tin. Thomas's shaft is down about 10 fathoms below adit. The men have sunk 5 fathoms last month, and we hope to sink at the rate of 5 fathoms per month. We are making good progress in fixing the engine at this part of the mine. We have been greatly hindered for three weeks on our dressing floors on account of the severe frost.—(Signed) John Williams, Joel Hooper.

COLONIAL, INDIAN, AND FOREIGN MINES.

BALKIS ESTERLING.—The following is an extract from the manager's letter dated January 18: "The end east in the 160 foot is on a good looking reef, but does not carry free gold. The stope in the No. 3 north reef is panning about 10 dwts. to the ton. The stope on the back of the main reef is also showing some very good gold—about 12 dwts. Everything is working all right, and if the reef in the bottom of the shaft only changes for the better, we shall be able to keep the mill continually running."

D'ARCY ESTATES.—Report dated 5th January: Main shaft sunk during the week 7 feet, total depth 240 feet. Rock continues very hard.—Main shaft. Portion 3 timbered to bottom and sinking will be resumed.

LA YESCA.—Captain Michell reports on January 16: San Miguel Mine. The tunnel during the past fortnight has been passing through a comparatively soft formation, consequently the extension made is exceedingly satisfactory. The forebreast of the drift at the end is somewhat more compact, carrying a very high percentage of arsenical mundic, also quartz slightly impregnated with copper. Near the roof of the tunnel are stones of galena ore, and water is issuing all over the face of the end. Everything in connection with the strata is looking highly favourable. Distance driven in the past fortnight 26 feet 4 inches. Total measurement 741 feet 1 inch.—Major shaft. The clearing and repairing of the workings have been extended 23 feet, and men are now engaged in ridding up the loose matter and securing the same, as depth is attained, with timber.—Wills' vein. I am pleased to say that at the point I put the men, a considerable improvement has taken place. They had not driven more than a couple of feet before it became apparent that the vein was within reach of them. Soon after they cut into it. The direction is about 40° to the north of west. The forebreast at present is entirely of vein matter. As the drivage extends the vein appears to be getting stronger.—Zapopan Mine. I am pleased to say the men have made very fair progress with the repair of the "Despacho" workings. We have already broken some good ore from here, but it will take a few more days to complete the staging, or before the men can commence to stope the back. Clearing and repairing the main tunnel is being pushed on with all possible dispatch, with the view of reaching the Loreto workings.—Erection of machinery. The feed pump between main mill building and boiler house is completed; feed water supply tank on the outside of the mill building finished; also the six pulp (or ground ore) tanks. The masons will commence the main mill supply tank to-morrow. All other work is being carried on in the usual manner.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ended December 28: Argent Section. Main engine shaft, No. 6 lode, No 1 level south. Stoping continued, but ore kept below, as mill is engaged on Zeehan-Montana Company's ore.—No. 4 lode, No. 1 level south. No. 2 winze sunk 5 feet, total 30 feet. Lode 1 foot 6 inches wide, fairly good seconds, but no firsts. From previous sinking we picked out 1 ton very good firsts, assaying 70 per cent. lead, and 112 ounces silver.—Silver Queen Section. New Shaft. Crosscut at No. 1 level for No. 8 lode driven 18 feet. A larger quantity of water is issuing, and we hope soon to cut the lode. Concentrator has been run 23 hours on Zeehan-Montana Company's ore, crushing 74 tons. Yield will be given next week.

NINE REEFS.—Fortnightly report of Captain John Woolcock, mine agent, dated January 23: Vyvyan's shaft, 220 feet level. In the stope working in the bottom of the level to the south of shaft, and north of winze, the lode formation is about 3 feet wide, and the quartz leader which is against the hanging wall varies from 6 to 10 inches wide, and by assays is worth for gold 1 ounce 10 dwts. per ton. The No. 2 stope in the back of the level having reached the north end of the shoot, the quartz became very narrow (only 2 inches wide), and the yield for gold materially reduced. The men were then put to stope in the bottom of level to the south of winze, where the lode is 3 feet wide, carrying quartz 8 inches wide, and this by assay is worth 1 ounce 5 dwts 14 grains of gold per ton. The No. 3 stope has been suspended for the present, for the same reason assigned above, and we have now started a No. 4 stope north from f ootway winze, where the quartz is from 10 inches to 1 foot wide, and worth by assay 12 dwts. 14 grains of gold per ton. This stope will improve in value as we gain north.—145 feet level south of shaft. The rise from the back of the stope at 190 feet from shaft has been put up 7 feet 7 inches. The quartz leader is from 6 to 8 inches wide, and worth 1 ounce 12 dwts. 4 grains of gold per ton. This is opening up some profitable stoping ground, and I am of an opinion that as we rise the quartz will widen. In the stope to the north of rise the quartz is from 1 foot to 18 inches wide, and worth by assay 17 dwts. 16 grains of gold per ton. The ore from this stope at present contains a good deal of arsenical pyrites, and we are unable to get as good results from the mill as we could wish. In the stope working to the south of rise the lode is 2½ feet wide, and the quartz varies from 6 to 8 inches wide, and is worth by assay 1 ounce 8 dwts. 9 grains of gold per ton. This is mostly free milling ore.—South shaft. I regret to say that we have had a very great deal of trouble here since my report of the 9th inst. After the pay the contractor (who has done nearly all the work at this shaft) cleared out without paying his coolies, and for two days there was nothing done but keep the water. It was then set to another contractor, and, after working four days, I found his coolies were not adapted for working in wet ground, as they did very little work, and was obliged to take the contract from him, and let it to another contractor who promised to do better work. The lode is porous, and is now draining the water from the 145 feet level, consequently the men have to work under numerous small streams of water, which will account in a great measure for the trouble, but soon after starting the second level the water will be taken up in a cistern, and this difficulty will be overcome. The shaft has been sunk 2 feet 3 inches, and is now 205 feet 3 inches from surface, and below the 145 feet level 60 feet 3 inches. We should have been down for our second level by this if the men had worked well. The lode is from 3½ to 4 feet wide, of a very promising appearance. A sample from the footwall part for a width of 20 inches gave by assay 5 dwts. 8 grains of gold per ton. Everything will be done to reach the required depth for our next level as soon as possible.—145 feet level north. The winze at 100 feet north of shaft has been sunk 5 feet 6 inches, total depth 15 feet. The lode is 6 feet wide, but we are only carrying about 3½ feet against the hanging wall, which is composed chiefly of quartz, with a little schist intermixed and highly-stained with oxide of iron; the part of the lode taken is worth by assay 2 dwts. 4 grains of gold per ton.—Prospecting. McTaggart's lode, No. 1 shaft. The level driving north of shaft, at 100 feet from surface, has been extended 4 feet 5 inches, total distance 48 feet 2 inches. The lode, which is 20 inches wide, is carrying more quartz than at any time since starting the level, and I hope it will soon improve in value. A sample from the end yesterday gave by assay 1 dwt. 14 grains of gold per ton. The crosscut west to the south of the shaft has been driven 7 feet 10 inches, total distance from level 26 feet 10 inches. Nothing of importance has been met with in this drivage. If we do not meet with anything of value in a little further driving, I purpose driving a short distance to the east of the level, so as to make sure that we are on the same part, now being worked on in the West Balaghat. The No. 5 shaft has been sunk 1 foot 3 inches; the total depth from surface is now 97 feet 11 inches. The lode is from 6 to 8 inches wide, but the ground on either side is hard. I fancied yesterday that the ground was changing, and shall be glad to be able to report an improvement in the lode soon; at present it is not of sufficient value to report. The water has somewhat abated.—Surface. There is nothing in this department that calls for comment, and the same will apply to the mill, machinery, and pitwork, which are in good order and working well.—Health. I am pleased to say the general health of the camp continues good.

OURO PRETO.—Passagem Mine: Mine report January 12: Mine: No. 1 shaft. A new 6 inch pole fixed and rods lengthened for same o shorten bucket left, and in a few days sinking will be resumed.—No. 505 end south-west. This end carries about 1.50 centimetre of lode composed of quartz, tourmaline and pyrites, and is progressing steadily. 505 north-east carries about 50 centimetres of ore between quartzite floors. 470 end north-east continues in a body of schist, with patches of ore at intervals. 400 end north-east continues in lode of fair appearance. 435 end north-east also in lode, but of low grade.—435 crosscut north-east between shafts. Continued in lode, only last day or so, cutting in footwall. Winze from 400 to communicate to the latter crosscut being advanced as much as possible. 365 end north-east carrying a fair looking branch about 90 centimetres thick. 315 end north-east continues in quartzite.—Rise over 315. Piercing through a body of schist, with small lines of lode at times. 365 end south-west continues in sterile rock.—215 end north-east. This is entirely in lode of fair quality ore.—Stopes. All those in operation continue much the same as when last reported on, large bodies of lode, though carrying rather a small percentage of pyrites, yet on the whole of moderate quality.

SUTHERLAND REEF.—The manager writes as follows:—January 10: West drive. 210 feet level has been driven 12 feet, making 202 feet in all. The reef looks well here. Winze No. 3 has been sunk 7 feet, making 88 feet. The reef is about 2½ feet wide, and is carrying very good gold.—East drive. 210 feet level has been advanced 17 feet, making a total of 180 feet. There are some stringers of quartz carrying a little gold, and there is every indication of an improvement after further driving. We found similar ground in the 150 feet level.—West drive, 310 feet level. 19 feet have been driven, this being the total length from the main shaft. The reef looks very promising, carrying a fair quantity of gold, say about an ounce to the ton.—East drive, 310 feet level. 21 feet have been driven, making a total of 43 feet from the shaft. The reef here is not quite so good as in the west drive. There has been a little work done at the 310 feet station. You will see that by this driving we are increasing our ore reserves, and we shall soon have sufficient ground opened up to warrant the erection of more stamps.

FERREIRA.—From the report on working operations for the quarter ending December 31: Profit for quarter, £45,832 6s. 8d.—Capital expenditure. Machinery and plant, £11,347 10s. 3d.; buildings, £685 6s. 11d.; permanent works, £2708 15s. 6d.; total, £14,741 12s. 9d.—Summary of working expenditure and revenue. Mining expenses, 19s. 5·58d. per ton; reduction expenses, 5s. 8·82d. per ton; transport expenses, 4·70d. per ton; total, 25s. 7·10d. per ton.—Mine. No. 1 main shaft sunk 39 feet, total depth, 997 feet. No. 2 main shaft sunk 79 feet, total depth 1024 feet. The 520 feet level has been extended in south reef 82 feet. The average width of reef is 1 foot 6 inches, and its average assay value is 4 ounces 14·26 dwts. of gold to the ton. The 820 feet level has been extended in south reef 756 feet. The average assay value is 3 ounces 14·58 dwts. per ton. The 420 feet level has been extended in main reef leader 143 feet. Average width 1 foot, and average assay value 1 ounce 5·9 dwts. per ton. The 520 feet level has been extended in main reef leader 97 feet. Average width is 1 foot 3·72 inches, and average assay value is 2 ounces 9·67 dwts. per ton, The 620 feet level has been extended in the main reef leader 84 feet. The average width is 1 foot 2·25 inches, and average assay value 1 ounce 10·93 dwts. per ton. Five winzes are being sunk in south reef, and three in main reef leader.

TRANSVAAL GOLD.—Extracted from general manager's advices, dated January 17: The low level adit between the east and west sections of Chi Mine was expected to be completed in a week. Progress was made with the Nu Theta tunnel.—Mills. Crushing at both mills was proceeding steadily.—Work, buildings, and machinery. Work was well forward at the new cyanide works for Kameel's mill. General. Native labour was abundant.

WENTWORTH EXTENSION.—Report dated January 5: South east drive from prospecting shaft No. 2 advanced 26 feet, total length 91 feet. Quartz vein continues about 2 feet wide. Preparations made to resume sinking main shaft.

ANGLO-MEXICAN.—The manager, writing from the mine under date of January 8, reports. Drift north from air winze. This drift was advanced 10 feet for the week under review, making a total length to date of 24 feet. The vein in the face of the drift is 8 inches in width, but as yet does not present any special features for comment.—Upraise drift north from No. 10 crosscut. This upraise has been started with the object of making a permanent ore chute for the ore extracted from No. 12 stope above the upper level, and will greatly facilitate work in this part of the mine. You will note that the work was advanced 11 feet for the week, the total length being the same.—Drift south from air winze. This drift was started south from the air winze during the past week, having advanced 13 feet up to date, but presents, as yet, nothing of special interest for comment.—Winze for man-way from Jesus Maria south. As indicated to you in my last report, we made connection during the past week between this winze and the upraise from the main tunnel. This finishes a most important piece of work, giving us an easy and short means of communication with the main workings of the mine, and, as soon as the ore chute, which is now being sunk near the man-way, is completed, it will not only greatly facilitate the extraction of ore, but will reduce the cost of same to a very great extent as well. The ore chute will probably be finished in about 10 days, and we will then be better fixed for work in the mine than we have been at any time since it was opened.—Widening and retimbering Old Peraza drift. The widening and retimbering of this drift has been undertaken in order to open up stopes along this part of the vein, and so both facilitate and increase the extraction of ore.—Stopes. The ore has fallen off in grade somewhat during the past week. Our best stopes, however, have not been worked much for several weeks past, owing to the fact that I am now preparing all the stopes in order to furnish plenty of ore when the water supply is regulated and the Bryan mill put in, as the entire mill will then require at least 100 tons per day.

AUSTRALIAN BROKEN HILL CONSOLS.—The mining manager reports by mail for the fortnight ended January 3:—Block 96, 280 level east, Prospecting drive stopes driven 23 feet. Stoping continued. No change in the north eastern stopes. The formation in the eastern face is about 2 feet 6 inches wide, carrying silicious iron on footwall, and a small vein of iron near the hanging wall, and the mundic is coming in again, which is a good indication. The southern stope is being carried downwards. A little native and ruby silver and fahlerz has been met with. No. 5 level east off incline driven 4 feet. The lode here is small and rather disturbed owing to a turn in its course. No. 1 rise off No. 4 level east off incline driven 5 feet. The veins in the lode formation are widening, and yielding a little fahlerz and galena, and ruby silver has been met with.—Note. The quantity of rock mined during the fortnight was 1248 cubic feet.—Machinery. Pumps and rock drills are in good order and working well. No. 2 boiler has been cleaned and tested during the holidays.

BALAGHAT-MYSORE.—Jos. Pryor, January 23: Ogle's shaft. The water has now risen to the cistern fixed just below the bottom of the 410 feet level, and seeing we have a plunger lift fixed at this place, we intend keeping the water at this depth.—Tennant's shaft. We are making fairly satisfactory progress with the cutting of the ground for the tip-plat west of the shaft at the 500 feet level, and hope in the course of another day or so to commence sinking below this level. In addition to the above we have also driven the 500 feet level north 15 feet 3 inches, or 19 feet 9 inches from the shaft; and the south level 12 feet 6 inches, or 17 feet 6 inches from the shaft. The ground in both levels at present is unproductive and very hard for driving. In order to push on with the shaft with greater speed, we have now withdrawn the Italians from the levels altogether, and have set the north drive to local hands on contract, but the south level we have decided to suspend for the time being. The 420 feet level north has been extended 18 feet, or 200 feet 9 inches from the shaft; the first 14 feet was in lode matter. We then struck the east and west dyke (as seen in the upper level) and are now going through it, and expect to again meet with the lode within about 40 feet from the present forebreast. The No. 1 winze in the bottom of this level has been sunk 5 feet 6 inches, or 52 feet 6 inches below the level. The quartz varies from 1 foot to 6 inches wide, and assays only 2 dwts. 15 grains of gold per ton. The rise in the back of this level has been advanced 1 foot 9 inches, or 14 feet 3 inches above the level, and then communicated with the level above. It appears a part of the lode is still standing to the west; we are, therefore, putting out a short crosscut to prove the ground from the 420 feet level north, and have extended it 4 feet 6 inches. The 420 feet level south has been advanced 11 feet 9 inches, or 99 feet 9 inches from the shaft. The lode occasionally carries a little quartz, but as yet it is not sufficient to value. The mid-level north has been driven 14 feet 6 inches, or 124 feet from the shaft. The quartz continues about 2 feet wide, but its assay value this week is very low, being only 3 dwts. of gold per ton. The winze in the bottom of this level has been sunk 2 feet 9 inches, or 14 feet 9 inches below the level, and was then communicated with the rise from the 420 feet level north. This has very considerably improved our ventilation. The trial midway level south on the western part has been driven 14 feet, or 28 feet from the winze. The quartz has recently been getting much smaller, and has varied from 1 foot 3 inches to 2 or 3 inches. There is no quartz in the present forebreast; and unless the end improves within the next few blasts, we shall suspend its further drivage. The stopes in the bottom of the midway level north yield quartz of from 1 to 3 feet wide, and assay about 6 dwts. of gold per ton. The 350 feet level north has been driven 16 feet 3 inches, or 271 feet from the shaft. I stated in my last report we were almost through the dyke. We went through it the next day—viz., at a distance of about 256 feet from the shaft. From this distance the ground passed through has been more or less of a lode formation, and occasionally it yields a little quartz. But I am not altogether satisfied that we are driving on the main part of the lode; unless a decided improvement is met with before the end of the month, I purpose driving a crosscut east to test the ground in this direction. The stopes in the bottom of this level produce quartz of from 1 foot to 1 foot 6 inches wide, and assay on an average about 6 dwts. of gold per ton. The stopes in the bottom of the 350 feet level south still yield quartz of from 2 to 3 feet wide, but the recent improvement in its assay value has not been maintained, it being now only worth 2 dwts. 7 grains per ton; and unless a decided improvement is soon met with we shall suspend the further stoping. The men engaged with the rearing up of the 8-inch plunger lift from the 285 feet level to surface are making fairly satisfactory progress, and we hope soon to get it in working order.—Surface. The general work at surface is being proceeded with in the usual order.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for four days ending December 31: Blackwood (No. 1) shaft, 150 feet level. North drive off east crosscut driven 7 feet, total length 87 feet. South drive off east crosscut extended 13 feet, total length 88 feet, and stopped; will now start crosscutting.—Howell (No. 2) shaft, 300 feet level; nothing has been done here since last report, owing to water rising on this level. Are pumping at main shaft in order to lower this water.—200 feet level. Have been cleaning out south drive on 10th floor of far north stopes and timbering up uprise, where connection was made with 150 feet level.—Marsh (No. 6) shaft, 2nd level. No. 3 east crosscut lengthened 12 feet, total length 169 feet, in country rock. Uprise in end of south drive shows a slight improvement, more ore showing on roof. We broke 5 tons, averaging 22 per cent lead and 61 ounces, and 5 tons 22 per cent. lead and 40 ounces silver per ton. Have stopped work in south stope off uprise in north drive for the present. We obtained 1 ton, assaying 17 per cent. and 41 ounces, and 8 tons 12 per cent. and 10 ounces silver per ton; have transferred men to No. 2 west crosscut to fossick along sides of stopes over back of main south drive, which are looking fairly well at present. We broke 6 tons, assaying 28 per cent. and 101 ounces, 1 ton 17 per cent. and 40 ounces, and 2 tons 15 per cent. and 14 ounces silver per ton. Stope down winze continues to yield fair grade carbonate ore in fair quantity. We broke 32 tons, averaging 20 per cent. lead and 56 ounces, and 26 tons 17 per cent. lead and 41 ounces silver per ton.—Retallick's workings. Nothing has been done in east crosscut off north drive down winze since last report. On 115 feet level we broke 2 tons, averaging 17 per cent. and 41 ounces, and 11 tons 25 per cent. lead and 15 ounces silver per ton. The assays for the week vary from 5 to 45 per cent. lead, and from 5·5 ounces to 406·6 ounces silver per ton.

BAYLEY'S REWARD CLAIM.—Mining report, dated Dec. 15: Sylvester shaft since last report has been sunk 8 feet, total now being 326 feet from brace.—North drive 280. North drive at the 280 feet level advanced 17 feet, total 75 feet from shaft. The walls we were driving on and reported last week have now apparently disappeared, and the favourable ground given place to harder rock; consequently will not for the present continue this much further. To all appearances it is a question if the lode will be again picked up until reaching the Cockshott shaft, as this is probably the main break.—160 feet level, Winze 160 feet level, continuation Gordon shaft, sunk 10 feet, total 27 feet. No particular change to report.—100 feet level. At the 100 feet level the men are employed timbering the south drive to prepare the upper ground for stoping when required.—Gordon shaft. Have this week resumed driving the south drive at the 50 feet level, Gordon shaft. Lode large, and at times showing very nice gold.—No. 1 intermediate. Stopes in the No. 1 intermediate continue to return fair stone, as reported last week.—Begelhole shaft. Stopes yielding stone of good grade, gold being frequently seen, some portions being very good indeed.—Cockshott shaft, north drive. Have started rise about 50 feet north of the shaft, which is at present 6 feet above back of drive. Lode is over 12 feet wide, very hard, but in places exposing small portions of ironstone containing fine gold.—Everard shaft. North drive has been extended 5 feet, full length being 185 feet from shaft. Lode is strong and well defined; being now underneath the big blow it will probably be of great width.—Crosscutting lode. As stated in last report it is intended to crosscut the lode at various points. In the first place we have driven 9 feet, no wall visible, proving it to be of great width. This will be continued until the footwall is reached.—Stopes. Stopes continue to yield stone of very good grade, some splendid gold from time to time being seen. Lode ranging from 4 to 6 feet wide.—McCulloch shaft. Sinking of McCulloch shaft has been suspended until the north drive is driven some distance beyond to enable the two parties to work, when sinking will be again resumed.—Lode croppings. The treating of the alluvial or lode croppings has improved during the week, some nice gold being obtained.—Water. On the 14th our gauge registered 73 points of rain having fallen the previous day, which only put 8000 gallons of water in the tank. The ground and water shed were very dry and porous, and took a considerable amount of rain previous to doing any good. We are at present making arrangements to obtain some extra water from Messrs. Browne and Lyon's tank to enable us, if possible, to reduce more stone, but will take some little time to make the necessary provision for pumping and filling the tanks which will be pushed on as rapidly as we can.—Stone crushed. During the week there has been crushed 100 tons, also, as usual, boiler cleaned. Yield, 500 ounces of gold. I regret this time having to report a decrease in the yield of gold, Stone, although of good value, is not sufficiently rich to make a yield of 700 ounces from the limited amount of stone crushed unless we have some of the very rich stone to mix it with, which again might be met with at any time. Unless this is the case I am afraid it will be impossible to keep the yields so regular, and do all I can they will be more uncertain than they have been hitherto. I was in hopes in the early part of the week that the usual return would have been maintained, but the boxes did not yield as well as we anticipated. Mr. Lyon will leave to-morrow for Melbourne, and will be able to advise with you as to past and future operations previous to returning.—Gold dispatched. On the 14th there were dispatched by escort 1400 ounces of gold (bar) as advised by telegram of the same date.—(Signed) W. H. Matthews.

BAYLEY'S REWARD CLAIM.—Mining report dated December 29: Sylvester shaft has been sunk for the week 7 feet, total 333 feet from brace, or 53 feet from chamber.—North drive 280, North drive at the 280 feet level extended 3 feet, total 78 feet from shaft. Face in hard country rock. I am now strongly of the opinion this must be the main fault, and the lode is further eastward to Cockshott shaft, as it appears on the surface and shown in the plan, consequently work in this drive will be suspended for some time at least.—165 feet level. Winze on continuation of Gordon shaft has been connected with the south drive at the 220 feet level, Sylvester shaft. At present timbering and otherwise making it secure.—100 feet level. At the 100 feet level men are still engaged timbering the south drive to enable the upper ground to be worked when required.—No. 1 intermediate. Stopes continue about the same as previously, and show no particular change, should be fair battery stone.—Gordon shaft. South drive, Gordon shaft, has been driven 6 feet, total being 116 feet from shaft. At this point have met with the same fault there is in the south drive, 100 feet level, Sylvester shaft. Will continue driving through the break as a prospecting drive.—Begelhope shaft. Stopes continue to yield stone of average grade.—Cockshott shaft. Rise at present 9 feet from back of drive. Lode now from 10 to 12 feet wide in places, showing small patches of ironstone.—Everard shaft. North drive Everard shaft extended 11 feet, total 196 feet, still carrying a portion of the lode, which is of great width.—Crosscut in lode. The crosscut in the lode from the north drive is at present 14 feet; no footwall visible.—Lode croppings. The treatment of the lode croppings is being continued, and, so far as we can judge, with fair results.—Water. The necessary staging and pumps have been fixed in Brown and Lyon tanks, and we are at present taking water from there, but I am afraid it will not last long without further rains, as the soaking is very great.—Slime pits. We are also constructing a larger number of slime pits at the battery, as those we have are not sufficient when crushing a larger quantity of stone.—P.S. We shall keep the battery running throughout the holidays, so there will be no stoppage.—(Signed) W. H. Matthews.

BAYLEY'S REWARD, NO. 1 SOUTH.—Mining report dated December 29: Main shaft, Main shaft (Gorrie's) since last report has been sunk 3 feet 6 inches, total now being 149 feet 6 inches from surface. The lode is still continuing in the shaft, running almost vertical, and is very hard and difficult to work, making the progress slow indeed. I have been in hopes every week the stone would become more broken, when there would be a much better chance of the water increasing, and the sinking would be more satisfactory. The stone still continues to show gold from time to time, and I should judge good battery stone.—Rise. The rise from the back of the south drive is at present 7 feet from timber. Lode is from 7 to 8 feet wide, in which we see a little gold; this, I think, will improve as we stope a little further north, where the best gold was seen when driving the level.—No. 2 shaft, Bayley's line. Contractors during the week have sunk 6 feet, total being 124 feet. Ground is slightly harder than it has been, and now making about 400 gallons of water per 24 hours, which will probably increase as we continue.—Machinery. During the week we have pushed on with the machinery as rapidly as possible. Ripple and blanket tables have now been completed, also fixing pumps and laying pipes to supply the battery. Battery tank is being constructed, and hope to have finished by the end of the week. There has been a good deal of work done in connection with the tailing and slime pits. We have excavated an opening 25 feet square and 6 feet deep; this will be puddled with the best clay material we can procure, timbered and divided in six compartments for the tailing and slime pits necessary owing to the short supply of water. The whole of this work I hope to see finished by the end of the coming week, and if we have sufficient water start crushing the beginning of the following.—Water. Owing to the hot weather, and this being the first time rain has fallen since the tank was constructed sufficient to put any water in, it is drying up and soaking away very fast, and I am afraid, at the present rate, unless further rain falls, the crushing we shall be able to do with what we have on hand will be very small. It is astonishing the quantity that disappears from day to day.

CAPE COPPER.—Captain Henwood, December 31: Ookiep. The rock in the 130 fathom level east of north crosscut is again presenting spots of copper. The 92 fathom level east of south crosscut is communicated with No. 19 level, thus causing good ventilation in this part of the mine. The men are put to resume the No. 19 level south at this depth. The 92 fathom level south-west of south crosscut is still yielding stones of copper ore, and at times saving stuff. The stope in the 92 fathom level north from bottom of No. 1 sink appears to be gradually falling off in value: present yield 2 tons of copper ore per fathom. The rock in the 58 fathom level is composed chiefly of quartz. The 48 fathom crosscut north of main east level is still spotted with copper ore, and at times it produces rich stones. In the latter part of the month we resumed the 48 fathom crosscut north of No. 6 winze on the flookan course. The rock is yielding occasional stones of copper ore. The stopes throughout the mine continue to yield well.—Captain Henwood, December 31. Trial Mines, Nababeep south. The rock in the 74 fathom level north-east of sha't has not undergone any change to notice since last report. It is still spotted with copper ore. The 59 fathom crosscut north of No. 1 winze is yielding occasional stones of copper ore.—Spectakel. The drive in the 36 fathom level south-east of new shaft is producing 2 tons of copper ore per fathom, and the stopes throughout the mine are yielding their usual quantities of copper ore.—Copperberg. The rock in bottom of winze sinking below the adit level is yielding 2 tons of copper ore per fathom. The sinking has been retarded in consequence of an influx of water from the old workings. The stope in back of adit level east of No. 1 south crosscut is also worth 2 tons of copper ore per fathom. The rock in the 30 fathom crosscut south of shaft is looking a little more congenial for copper ore than for some time past.—Ookiep East. Stoping in bottom of 66 fathom level around winze.—Returns for December. Ookiep, 1870 tons of 20 per cent.; Spectakel, 135 tons of 29 per cent.—Arrival at Port Nolloth. The *Golconda*.—Arrivals at Swansea. The s.s. *German*, with 1410 tons of ore and 580 tons of regulus; and the *Migwen*, with 2330 tons of ore.

CHIAPAS.—Mine report for fortnight ending December 31: Providencia Aver driven 8 feet, total 204 feet. Continues as per last report, though slightly improved in value. Assay, gold 8 dwts., silver 7 ounces 8 dwts., copper 2·96 per cent. Providencia south hill, crosscut No. 2, driven 12 feet, total 182 feet. Ground softer. Taylor main extension driven 13 feet, total 559 feet 6 inches. Rock changing, and softer in character; as we do not appear to be in the true country rock we are still pushing this on. Copper creek Arciga driven 10 feet, total 54 feet. Copper creek crosscut driven 7 feet, total 16 feet. Driven from end of crosscut 10 feet, total 10 feet. Making a circuit, ore disturbed by dykes, and as yet do not know how thrown. Santa Fé hill, drift No. 3, driven 3 feet 6 inches, total 36 feet. In hard wollastonite.—Taylor Copper creek crosscut. This is a new crosscut from end of Taylor main, where it turns towards Santa Fé winze, the intention being to drive out towards Copper creek. Driven 6 feet, total 6 feet. In hard wollastonite.—Extraction. Old Providencia. Extracted 315 tons. Assays 18 dwts. gold, 10 ounces 19 dwts. silver, and 4·92 per cent. copper. Continues to show fine face of ore in stopes, in upper stope carbonate ores considerably increased,—Santa Fé stopes. 239 tons extracted. Assays 13 dwts. gold, 8 ounces 15 dwts. silver, 4·33 per cent. copper. Never seen stopes looking better.—Santa Fé hill. 157 tons extracted. Assays 1 ounce gold, 8 ounces 16 dwts. silver, 6·06 per cent. copper. Stripping hill, south side, to trace downwards on side if possible. Drought still continues unprecedented here.

CRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, December 20: The rise from the bottom of the 606 feet level at the Victoria and Queen shaft is now 26 feet, at which point I broke through into the drive which we put in at the bottom of the western side of the winze from No. 9 level in Craven's Caledonia. I am unable to give the size of reef until we get a little more of it stripped. The reef in the underhand stope in No. 9 level is about 9 inches thick. In the three stopes over No. 9 level the reef will also average 9 inches. The drive on the fault in No. 8 level has been extended a further 21 feet, making a total of 93 feet from starting point. At a distance of about 85 feet we passed through a reef about 8 inches thick. The haulage of quartz is 29 tons, making a total of 126 tons in the paddock. The eastern level on the Victoria and Queen reef has been extended 7 feet, making a total of 76 feet from boundary peg, and the reef remains about the same as last reported on. In the underhand stope from this level the reef is about 10 inches, and the reef in the four stopes over the level will average about 10 inches, and seems to be improving in quality. We have hauled about 33 tons of quartz for the fortnight, making a total of 149 tons in the paddock.—(Signed). G. Cabassi.

DON PEDRO.—Maquiné Mine, half-monthly report, January 15: Operations have again been carried on towards the development of the mine in depth. The new lift of pumps referred to in my report of December 31, was completed and put to work on the 6th inst., and sinking has again been resumed. The ground is composed of hard sandstone and blasting materials have to be used.—North drivage. This has now reached the northern extremity of the canao shoot of lode. The drivage is now being turned to be driven east of north and will be driven out to intersect the lodes above.—Incline east. This has been continued in a very large formation, the upper part of the stope being of low quality, whereas the bottom is of good quality.—60 level south. This has been continued in general work of fair quality, but progress has been very slow owing to the troublesome nature of the formation in water. This drivage is letting down the water very freely from the level above, and as it is advanced the formation will become drained.—Morro de Santa Anna. The drivage at this place has been continued without change to note, lode averaging from 6 to 8 feet thick, with good looking quartz.

FORBES REEF.—The mine manager reports, under letter dated January 6, as follows:—Main shaft drifts. The face of the south drift is certainly in more favourable formation for finding the reef now. I fully believe the reef will be picked up south of the shaft, and I trust the directors will give me the necessary plant to put down a bore hole.—Electric plant. We are making fair progress with the erection of this plant.—December crushing, No. 1 mill. Tons milled, 1500; stamps working, 20; number of days mill ran 22 days 5 hours; smelted gold won 27 ounces.—Avalanche mill. Tons milled, 2113; stamps working, 20; number of days mill ran, 22; smelted gold won 133 ounces 1 dwt. 2 grains.

HARRIETVILLE.—Fortnightly report of Mr. T. G. Davey, superintendent, dated January 5: Mons Meg Mine. Rise at back of drive south of winze, 100 feet below tunnel D, advanced 7 feet. Lode 2 feet wide, and assaying 4 dwts. per ton.—Stopes. Lode in stope at level of tunnel D 12 feet wide, assaying 3 dwts. per ton.—Stope at back of 240 feet level below J. Lode 3 feet wide, assaying 13 dwts. per ton. North stope at same level lode, has become small and poor.—Underhand stope below drive south of J. Lode 18 inches wide, assaying 1 ounce of gold per ton. This stope is almost exhausted. Underhand stope at same level on north shoot, lode very small and poor.—Saint Bernard Mine. No work has been done here since the 21st December. Operations will be resumed on the 7th inst.—Surface. A trial crushing of 20 tons of stone is being taken from Redpath's lode, which will be put through the mill during the present month.

HARMONY GOLD AND LAND.—The following is an extract from a letter from Mr. Procter, of the 17th ult.:—I have made a start on our ground at Pebbine. I have let the digging and sinking of a trench across the formation to a contractor here at 4s. the cubic yard, he to find his own explosives, and I find the tools. The contractor has 60 Kaffirs at work; they are splendid boys, and are opening up the ground very quickly. They have gone through a large area of capital slate formation very similar to Sutherland Reef, and have crossed several stringers of quartz. They are nearing a large quartz outcrop, on which I rely, and probably by next mail I shall be able to tell you something satisfactory about the reef. On Monday last, thanks to the kindness of the head official in Leysdorp, Mr. de Villiers, I was enabled to visit the Gravelotte, Moore's Hope, and Berberovitch's mines down the range. None of these properties are on the line of Sutherland Reef, but each belt on which they are severally situate crosses our property. Baron von Brueche showed me all over the Gravelotte; he is engaged in developing his reefs, of which one—a large body of stone—contains a high percentage of antimony, but carries very rich gold. He is down about 200 feet on this reef, and he expresses himself as well satisfied with his results. His other reef contain no antimony, and

one, in which is a large quantity of iron, he feels assured will prove very valuable. Berberovitch has been crushing stone at the President mill, and he told me that, without picking his rock, he had taken out nearly 1½ ounce to the ton. I am glad that work is being done by these people, and hope they will be successful, as I am confident their reefs cross our farms. Our properties will not be properly prospected for ten years, the area is so great, and the entire country is so highly mineralised. This will be one of the richest gold fields in Africa.

MOUNT LYELL.—The London board has received the following report from the Melbourne board, viz., for the week ending Dec. 20: Indicator winze No. 3 tunnel. The winze has been sunk 4 feet 6 inches, total 50 feet, still sinking in high grade copper ore. The auriferous clay vein is still continuing down, and though small, assays high for gold. There is also a little native copper showing in hanging wall rock.—Rise above old ore winze No. 4 tunnel. This rise has been holed through to the south drive, No. 5 tunnel, the total height being 102 feet above 4 tunnel; height risen for week 6 feet.—South drive 50 feet level, engine shaft No. 4 tunnel. The drive has been widened out and contract let to put up a rise, work to commence as soon as the overhauling of the machinery is completed.—North drive 50 feet level engine shaft No. 4 tunnel. The north drive has been advanced 2 feet, total 6 feet, ground intensely hard.—No. 2 crosscut 75 feet level engine shaft No. 4 tunnel. Work in the stopes has been continued as usual; the rich vein is small and requires careful picking.—No. 1 winze 75 feet level, engine shaft No. 4 tunnel. Underhand stoping has been continued and a little rich ore broken.—North drive 100 feet level engine shaft No. 4 tunnel. This drive has been advanced 3 feet, total 75 feet. The face is now in solid pyrites of normal value.—No. 5 tunnel. The contractors have driven 11 feet, total 939 feet. The country is of the usual character, but is breaking better.—Ore raised 192 bags, weighing 12 tons and containing 3,444 ounces silver, and 1 ton 19 cwts. 2 qrs. 1 lb. copper have been raised, bagged, and sampled.

MONTANA.—I am instructed to inform you that the operation of the 60 stamp mill will be suspended on the 15th instant, and to give you the following explanation of the circumstances which, in the opinion of Mr. R. T. Bayliss, renders it advisable to discontinue working this mill for the next few month. Mr. Bayliss having arrived in London, the directors have had the advantage of personal conference with him on this subject, and they fully concur with his views. The 60 stamp mill was constructed specially for the treatment of low grade ores, that is to say, ore not exceeding a value of $10 per ton. In past years the tonnage of low grade reserves has always largely exceeded the reserves of high grade ore, but the conditions now are reversed, due to the fact that during the past 12 months the development of the mine, and particularly that of the New Castletown vein, has resulted almost entirely in the discovery of high grade ore (the low grade reserves consequently being considerably reduced), and the tonnage of low grade ore now available for extraction if not sufficient to keep this mill in regular operation without additional expenditure, which the directors do not think it advisable to incur. Briefly I may state, that to maintain this low grade mill in operation at the present time, it would be necessary to employ six additional machines in the extraction of ore from various parts of the mine, and these drills must either be taken from prospecting work, or provided at a cost of a considerable increase in monthly working expenses. The directors, feeling it of the utmost importance that the exploration of the mine should be vigorously pursued, are not disposed to curtail the present expenditure under this head; and deeming it undesirable to increase current working expenses, they have determined to shut down the 60 stamp mill until the accumulation of low grade ore in the mine is found to be of sufficient quantity to operate this mill continuously for some months. This accumulation will probably cover a period of from four to six months, when the mill will be re-started, and run so long as low grade ore may be available for its operation. The adoption of this policy will not affect the regular monthly profit now being earned at the mine, as the grade of ore treated in the 50-stamp mill will be of higher value, and the directors are advised that this arrangement is fully justified by the accumulation and increased value of the high grade ore developed during the past year. Mr. Bayliss, in recommending the temporary suspension of the 60 stamp mill, says the adoption of this policy will enable us to show the same, and possibly a larger, monthly profit than at present, upon a smaller output, and at a decreased monthly expenditure on account of working expenses; maintaining at the same time a full and efficient force upon the development work. As the closing of the 60 stamp mill, if unexplained, might cause some uneasiness in the minds of shareholders, the directors have decided to communicate the foregoing particulars by circular, and they entertain the belief that, inasmuch as the reason for suspending the operation of this mill is due to the fact that the ore bodies discovered during the past year have been almost exclusively of high grade value, the shareholders will regard the existing condition of affairs as a matter for congratulation rather than concern. Mr. Bayliss arrived in London on the 7th instant, and the directors intend to call the half-yearly meeting at an early date, as it is probable Mr. Bayliss may have to return to Montana early in March.

MYSORE REEFS (Kangondy).—Fortnightly report of Captain M. Scantlebury, mine agent, dated January 23: Underlie shaft. The 325 feet level north has been extended 20 feet 9 inches, now 106 feet 3 inches from shaft. The quartz is 1 foot 6 inches wide, assaying 2 ounces 17 dwts. of gold per ton. Winze below 325 feet level north has been deepened 7 feet, now 24 feet 6 inches below the level. The quartz is 2 feet wide, assaying 2 ounces 3 dwts. 6 grains of gold to the ton. Rise No. 1 above 325 feet level north has been put up 2 feet 3 inches, now 15 feet 6 inches above the level. The quartz is 2 feet wide, assaying 6 dwts. 20 grains of gold to the ton. Rise No. 2 above 325 feet level north has been put up 7 feet 6 inches, now 7 feet 6 inches above the level. The quartz is 15 inches wide, assaying 1 ounce 5 dwts. of gold to the ton. Winze below the 250 feet level north has been sunk 2 feet 3 inches, now 19 feet 3 inches below the level. The quartz is 9 inches wide, assaying 2 ounces 10 dwts. of gold to the ton.—Vertical shaft. The crosscut east at the 260 feet level has been extended 4 feet 6 inches, now 42 feet 6 inches from shaft. At the point of intersection the lode is pinched. We have driven north on it 13 feet 6 inches. It is now showing a good hanging wall and producing a little low grade quartz. Winze below the 200 feet level north of crosscut has been sunk 6 feet, now 11 feet below the level. The quartz is 1 foot 6 inches wide, assaying 2 dwts. 22 grains of gold to the ton. Winze below 200 feet level south of crosscut has been sunk 1 foot, now 29 feet below the level. The quartz is 1 foot wide, assaying 6 dwts. 12 grains of gold to the ton.

MYSORE GOLD.—R. Hancock, January 23: Mining operations for the fortnight ending January 21. Rowse's shaft, 1460 feet level north of winze. This end has been driven 16 feet, making a total distance driven of 100 feet. The lode is 3 feet 6 inches wide, assaying 3 dwts. 6 grains.—1460 feet level south of winze. This end has been driven 22 feet 6 inches, making a total distance driven of 159 feet 6 inches. The lode is 3 feet wide, assaying 14 dwts. 8 grains. —1360 feet level south of crosscut. This end has been driven 17 feet, making a total distance driven of 177 feet 4 inches. The lode is 1 foot wide, assaying 1 ounce 2 dwts. 4 grains. There are three stopes in the back of this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 6 dwts. 22 grains. —1360 feet level north of crosscut. The lode in the stope in the back of this level is 2 feet wide, assaying 5 dwts. 5 grains.—1360 feet level north of winze. The lode in the stope in the back of this level is 3 feet wide, assaying 10 dwts. 10 grains.—1260 feet level north. There are four stopes in the back of this level, the average width of the lode being 5 feet 7 inches, giving an average assay of 19 dwts. 19 grains.—1260 feet level south. The rise in the back of this level has been put up 15 feet 6 inches, making a total height of 61 feet 6 inches. The lode is 3 feet 6 inches wide, assaying 15 dwts. There are two stopes in the back of this level, the average width of the lode being 4 feet, giving an average assay of 1 ounce 15 dwts. 6 grains. —1160 feet level north. There are six stopes in the back of this level, the average width of the lode being 1 foot 8 inches, giving an average assay of 1 ounce 5 dwts. 12 grains.—1160 feet level south. This end has been driven 23 feet 6 inches, making a total distance driven of 284 feet. There is nothing of value here to report. The lode in the stope in the back of this level is 2 feet wide, assaying 1 ounce 19 dwts. 4 grains.—1060 feet level north east. This end has been driven 21 feet 6 inches, making a total distance driven of 571 feet 6 inches. —990 feet level north. We have a pare of men engaged stripping down side in the back of this level, in which the lode is 1 foot wide, assaying 13 dwts. 1 grain.—890 feet level north. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 1 ounce 6 dwts. 3 grains.—890 feet level north of crosscut. This end has been driven 21 feet 6 inches, making a total distance driven of 175 feet. The lode is 3 feet wide, assaying 4 ounces.—890 feet level south. This level has been driven 26 feet 9 inches, making a total distance driven of 185 feet 9 inches. There are a few small stringers of quartz in the end.—780 feet level north. The lode in the stope in the back of this level is 2 feet wide, assaying 19 dwts. 14 grains.—780 feet level north on new chute. This level has been driven 24 feet, making a total distance driven of 273 feet. The lode is 5 feet wide, assaying 2 ounces 3 dwts. 6 grains. The No. 2 rise in the back of this level has been put up 15 feet, making a total height of 19 feet. The lode is 5 feet wide, assaying 1 ounce 2 dwts. 4 grains. There are two stopes in the back of this level, the average width of lode being 2 feet, giving an average assay of 1 ounce 18 dwts. 22 grains.—620 feet level north of crosscut. This level has been driven 7 feet, making a total distance driven of 303 feet. The lode is 6 inches wide; no assay made. There are three stopes in the back of this level, the average width of the lode being 2 feet 8 inches, giving an average assay of 5 dwts. 5 grains.—620 feet level south of crosscut. The lode in the stope in the back of this level is 2 feet 6 inches wide, assaying 13 dwts. 1 grain.—Crosscut east 620 feet level north. We have resumed the driving of this crosscut; driven 5 feet, making a total distance driven of 118 feet from the main level.—Crocker's shaft. This shaft has been sunk 17 feet 6 inches, making a total depth of 45 feet below the 620 feet level. The lode is 2 feet wide, assaying 3 dwts. 6 grains.—466 feet level north. There are two stopes in the back of this level, the average width of the lode being 4 feet, giving an average assay of 2 dwts. 14 grains.—400 feet level north. There are four stopes in the back of this level, the average width of the lode being 2 feet 9 inches, giving an average assay of 12 dwts. 11 grains.—296 feet level north. There are three stopes in the back of this level, the average width of the lode being 1 foot 10 inches, giving an average assay of 1 ounce 3 dwts. 10 grains.—236 feet level north. There are four stopes in the back of this level, the average width of the lode being 1 foot 6 inches, giving an average assay of 1 ounce 6 dwts.—Taylor's shaft, 466 feet level north. The lode in the stope in the back of this level is 3 feet wide, assaying 1 ounce 7 dwts. 10 grains.—Gilbert's shaft, 520 feet level north. The lode in the stope in the back of this level is 2 feet 2 inches wide, assaying 11 dwts. 17 grains.—520 feet level south. The lode in the stope in the back of this level is 2 feet wide, assaying 19 dwts. 14 grains.—430 feet level north. There are two stopes in the back of this level, the average width of the lode being 1 foot 9 inches, giving an average assay of 18 dwts. 22 grains.—366 feet level north. The lode in the stope in the bottom of this level is 2 feet wide, assaying 1 ounce 3 dwts. 6 grains.—290 feet level north. There are two stopes in this level, the average width of the lode being 3 feet, giving an average assay of 9 dwts. 11 grains,—180 feet level south. There are three stopes in the back of this level, the average width of the lode being 3 feet 10 inches, giving an average assay of 1 ounce 5 dwts. 13 grains.—Tennant's shaft. This shaft has been sunk 12 feet 6 inches, making a total depth of 100 feet 2 inches below the 600 feet level.—520 feet level north. There are two stopes in the bottom of this level, the average width of the lode being 2 feet 9 inches, giving an average assay of 13 dwts. 8 grains.—290 feet level, south of north crosscut. The lode in the stope in the bottom of this level is 1 foot 6 inches wide, assaying 1 ounce 13 dwts.—290 feet level south. We have a pare of men engaged blasting out a piece of quartz in the eastern side of this level, in which the lode is 1 foot wide, assaying 1 ounce 9 dwts. 6 grains. Schaw's shaft, 450 feet level north of crosscut. There are two stopes in this level, the average width of the lode being 1 foot, giving an average assay of 1 ounce 12 dwts. 15 grains.—450 feet level north, south of crosscut. The winze in the bottom of this level has been sunk 9 feet, making a total depth of 141 feet 6 inches. Lode 1 foot wide, assaying 2 dwts. 14 grains.—Driving north on the eastern part of the lode. This end has been driven 3 feet 3 inches, making a total distance driven of 5 feet 9 inches. The lode is 1 foot 6 inches wide, assaying 3 dwts. 22 grains. There are three stopes in the back of this level, the average width of the lode being 1 foot 8 inches, giving an average assay of 3 dwts. 21 grains.—McTaggart's shaft. This shaft has been sunk 1 foot 3 inches, making a total depth of 50 feet 6 inches below the 550 feet level.—550 feet level north. This level has been driven 13 feet, making a total distance driven of 19 feet. The crosscut west from the shaft at the 550 has been driven 12 feet 3 inches, making a total distance driven of 33 feet 9 inches.—450 feet level south. The lode in the stope in the back of this level is 1 foot 6 inches wide, assaying 9 dwts. 2 grains.—320 feet level north. The lode in the stope in the back of this level is 1 foot wide, assaying 2 dwts. 14 grains.—320 feet level south. The lode in the stope in the back of this level is 1 foot 3 inches wide, assaying 7 dwts. 19 grains.—Glen shaft, 250 feet level north, crosscut west. This has been driven 10 feet, making a total distance driven of 236 feet.—Crosscut east. This has been driven 2 feet 6 inches, making a total distance driven of 289 feet 6 inches. —Ribblesdale's shaft. This shaft has been sunk 11 feet, making a total depth of 512 feet,—1060 rise. This has been put up 4 feet, making a total height of 84 feet.—Williams' shaft, crosscut east from the 173. This has been driven 2 feet 6 inches, making a total distance driven of 100 feet 6 inches. Health good.

NEW VIRGINIA (Transvaal).—This company's mine manager, Captain A. P. D. Hodge, reports that a distance of only about 30 feet remains to be driven in the No. 1 adit level to effect communication with Curtis's shaft. When this is complete it will give further facilities in transport of ore, and also greatly assist in the drainage of the mine. He also reports that in driving this adit good ore has been extracted therefrom, and sent to the mill. The report of progress in Hodge's winze, under date 29th December, states—"We have been stoping the bottom along north for a distance of 30 feet. Reef from 3 to 4 feet wide, the ore being dry and panning well, which is now going through the mill, assaying 18 dwts. 14 grains." The free gold extracted by ordinary milling is a very small proportion of that contained in the ore. The manager adds, still referring to Hodge's winze—"No doubt the deeper we can work on the Von Brandis reef the richer and wider the ore; it may be more refractory, but will not much matter, seeing we have our cyanide plant to treat it and recover the gold. The walls are regular and well defined. In depth there is, as I have all along pointed out, an abundance of first-class ore. The stope near to Curtis's shaft above 80 feet level still holds on, and produces good milling ore. I expect about 500 tons from this point." And later in the same report—"The mill works splendidly, and the cyanide plant is in order. I am glad to say the vats have been well put up, and I believe are thoroughly staunch."

NEW CHUM.—The following is a copy of report on the property by Mr. A. B. P. Bayne: I am indeed pleased to hear that your directors have determined on sinking forthwith. As you know from the many inspections I have made at various times of the mine, I am of the same decided opinion expressed by Messrs. Pryor, Boland, Gambette, Johnston and Samuels, viz., that without doubt you have close underfoot a large formation. From the never-failing overlay of such heavy black mineralised slate, together with the show of gold in the neck, you will, I have no doubt, find the new reef a rich one—one that may equal, if not exceed, any yet opened on the field; and this, when taking into consideration the enormous returns from other mines upon the New Chum lode, is saying a lot. It has been incontestably proved that when any mine upon this line of reef has once obtained the key to centre country, it is but a matter of time for such to become a dividend-payer. In conclusion, it is not necessary for me to wish you success, for that is, with a little perseverance, now assured.

No. 7 NORTH-EAST QUEEN.—The following is the result of crushing for past fortnight:—During the fortnight Perry and party have taken out all the stone in sight in their block, and have given it up; they crushed 16½ tons for 31 ounces 3 dwts. 12 grains of gold. The crosscut in the No. 7 western level has been extended 9 feet, making the total distance from level 33 feet. We have passed through the water, leaving it on the eastern side. The country, which is granite, has been favourable for working, having good side heads and floors coming in from the back.—(Signed) G. Cabessi.

NUNDYDROOG.—Thomas Richards, January 23: Report for the fortnight ending January 19: Taylor's shaft. The 1160 feet level south has been driven 20 feet 6 inches, total distance 30 feet. Lode 9 inches wide, assaying 5 dwts. The 1160 north has been driven 21 feet, total distance 36 feet. Lode 1 foot 6 inches wide, assaying 7 dwts. 12 grains. The 840 north from crosscut east has been driven 4 feet 6 inches, total distance 6 feet. Lode 3 inches wide, assaying 3 dwts. 18 grains. In three stopes in the back of the 760 north the lode averages 3 feet 8 inches in width, and 15 dwts. 10 grains in assay value. The lode in the stope in the bottom of the 680 north is 2 feet wide, and assays 10 dwts. The 600 north has been driven 9 feet 6 inches, total distance 421 feet 6 inches. Lode of no value in the drivage. In the stope in the back of this level the lode is 2 feet wide, and assays 7 dwts. 12 grains. In the three stopes in the bottom of the 520 north the lode averages 2 feet 2 inches in width, and 16 dwts. 6 grains in assay value. The 520 feet level has been driven in a north-easterly direction on cross course 10 feet 6 inches, total distance 23 feet 6 inches. In the stope below the 450 north, to form intermediate drivage, the lode is 2 feet wide, and assays 5 dwts. The lode in the stope in the bottom of the 370 north is 2 feet 6 inches wide, and assays 8 dwts. 18 grains. Main shaft has been sunk, total depth 34 feet 6 inches below the 1000 feet level. Lode 1 foot wide, assaying 3 dwts. 18 grains. The 1000 north rise has been communicated with the 920 feet level by a drivage in the footwall at the latter level. At the point of communication the lode is 1 foot 6 inches wide, and assays 1 ounce 5 dwts. The 920 north has been driven 6 feet, total distance 167 feet; and the lode being still in a very disordered condition, the drivage was turned to follow the crosscourse recently passed through from a point 131 feet north from the shaft. The level has been extended 12 feet along the crosscourse, or lode, the footwall portion of which is 1 foot 6 inches wide, and assays 2 ounces 17 dwts. 12 grains of gold per ton. The total distance of this drivage from the shaft is 150 feet to the present end. The lode in the stope in the back of this level south is 3 feet 6 inches wide, and assays 17 dwts. 12 grains. The 680 north has been driven 12 feet, total distance 367 feet. Lode 6 inches wide, assaying a trace of gold only. Crosscut east from the 680 north has been extended 14 feet, total distance 245 feet. A few small branches of quartz have been passed through. Kennedy's shaft has been sunk 4 feet, total distance 4 feet below the 600 feet level. The 600 crosscut west has been extended 9 feet, total distance from shaft 15 feet 6 inches. The 520 south has been driven 16 feet 6 inches, total distance 379 feet 6 inches. Lode 1 foot wide, assaying 8 dwts. 18 grains. The 520 south rise has been put up 34 feet, total distance 40 feet. Lode 2 feet wide, assaying 2 ounces. The north shaft has been sunk below this level 5 feet, to form plat for the convenience of filling skips, &c., the quartz having been left intact in the hanging side. No sample has been taken. The 520 north has been driven 18 feet 6 inches, total distance 387 feet. Lode 3 feet 6 inches wide, assaying 2 ounces. The 520 north rise has been put up 42 feet, total height 56 feet. Lode 3 feet wide, assaying 10 dwts. The 440 south has been driven 19 feet 6 inches, total distance 735 feet 6 inches. Lode 6 inches wide, assaying 3 dwts. 18 grains. The 370 south has been driven 18 feet, total distance 515 feet. Lode 1 foot 3 inches wide, assaying 2 ounces 11 dwts. 6 grains. The lode in the bottom of the 370 north is 6 feet wide (footwall part now being stoped), and assays 1 ounce 5 dwts. In three stopes in the back of this level the lode averages 2 feet 10 inches in width, and 1 ounce 15 dwts. 10 grains in assay value. Crosscut west from the 370 north has been extended 17 feet, total distance 224 feet. No change. The 300 south has been driven 30 feet 6 inches, total distance 324 feet 6 inches. Lode 3 feet wide, assaying 4 ounces 5 dwts. In the stope in the back of this level the lode is 1 foot wide, and assays 6 dwts. 6 grains. The rise from the 300 north stope has been put up 19 feet, and will soon reach the 230 feet level. Lode 1 foot wide, assaying 5 dwts. The 230 north has been driven 20 feet 6 inches, total distance 284 feet 6 inches. Lode 1 foot 6 inches wide, assaying 5 dwts. The 160 north has been driven 5 feet 6 inches, total distance 142 feet. Lode 1 foot wide, assaying 7 dwts. 12 grains.—Old mill samples. Rough quartz through stonebreaker, 1 ounce; smalls, 12 dwts. 12 grains.—New mill samples. Rough quartz, 1 ounce 10 dwts.; smalls, 1 ounce 5 dwts.

QUEENSLAND CARATAL SYNDICATE.—The secretary informs us that advices have been received from the Orient Mines, dated 28th December last, to the following effect:—The s.s. *India*, by which the turbine has been shipped, is due in Cairns to-morrow, and we have arranged to have the whole of the consignment sent up to the head of the inlet by the lighter which meets the mail boat, so as to avoid transhipment at the port. During the last five weeks the progress of the work has been most satisfactory; and now that the excavations for the tramway are completed, our heaviest work is done. Everything is ready to commence laying the sleepers for the rails. The water race is not yet finished, but will be pushed on after the holidays. I propose commencing building the dam at the same time the fluming is being put in. We intend starting driving the 300 feet tunnel after the holidays, in order to get into some of the richer shoots of stone ahead, which were sunk on in the top tunnel.

SUTHERLAND REEF.—Under date January 17 the manager writes:—East drive 150 feet level has been driven 178 feet. The reef is somewhat intermixed with slate, but is payable. Rise in east drive 150 feet level has been commenced 48 feet east of winze No. 4; 4 feet have been risen, but there is nothing fresh to report here. West drive 210 feet level has been driven. The reef continues the same. Winze No. 3 7 feet have been sunk, making a total of 75 feet. The reef is about 3 feet wide of solid quartz, and pans very well—about 2 ounces to the ton.—East drive 210 feet level. 21 feet have been driven, making 201 feet. The reef has greatly improved. There is not so much slate, and pans fairly well—about 15 dwts. to the ton. West drive 310 level has been driven 36 feet. There is a great improvement here, and we are got into a body of quartz about 3½ feet wide, showing a considerable amount of visible gold. East drive 310 feet level has been driven 66 feet. Taking a sample across the whole reef, which is about 4 feet from foot to hanging-wall pans at least 1½ ounce to the ton. I must ask you to remember that these two are very important points in the mine, and I am quite satisfied by the indications in this level that as we go down the mine will prove richer than in any other of the upper levels. We are still engaged at the 310 feet station. As soon as this is completed I shall sink the shaft another 8 or 10 feet below the level for a sump.—Battery. I hope to get this in full swing early in February. There is a little more prospecting lately started along the range. Native labour is plentiful.

SPITZKOP FARM.—Under date January 17, the manager writes: Work has gone on very satisfactorily here. The battery is being covered in; the excavations for cyanide plant are approaching completion; and hydraulic sluicing and stripping reef are going on well. About 1200 tons of quartz has been exposed, of apparently very good quality.

YERRAKONDA.—Fortnightly report of Captain Scantlebury, dated January 23: Beresford's shaft. The 300 feet level north has been extended 11 feet 6 inches, now 22 feet from shaft. The lode is 2 feet wide, composed of solid quartz, assaying 1 ounce 21 grains per ton. Crosscut west 300 feet level south has been extended 6 feet 6 inches, now 6 feet 6 inches from shaft. A week since I removed these men to stope the back of level head of rise south of shaft. 200 feet level north has been extended 15 feet 3 inches, now 299 feet from shaft. The lode is 2 feet wide, showing good walls, and producing a little quartz of low grade. End head of rise, 200 feet level south has been advanced 14 feet 3 inches, now 44 feet 6 inches from rise. The quartz is 18 inches wide, assaying 14 dwts. 8 grains of gold to the ton.—Stope in back of this level. The quartz is 2 feet wide, assaying 10 dwts. of gold to the ton. New engine shaft has been sunk 6 feet 6 inches, now 128 feet 6 inches from surface. We have a great deal of water to contend with.—Trial shaft. This has been sunk 9 feet, now 28 feet 6 inches from surface. The lode is 3 feet wide, composed of solid quartz, showing a little free gold in the pan.

EXPORT AND IMPORT TRADE.

THE BOARD OF TRADE RETURNS—JANUARY TABULAR STATEMENT.

Specially compiled for "The Mining Journal" from the Board of Trade Returns.

THE Board of Trade Returns for January show that the Imports for the month amounted to £36,753,068, as against £38,458,613 for the corresponding month last year, being a *decrease* of £1,705,545. The Exports for the month amounted to £18,224,236, compared with £18,151,880 in January, 1894, or an *increase* of £72,356. The Exports of Foreign and Colonial Merchandise for January amounted to £3,887,258 as against £4,346,643 in January, 1894, being a *decrease* of £459,385.

EXPORTS:—SUMMARY OF INCREASES AND DECREASES

Principal and Other Articles.	Quantities. Increase.	Quantities. Decrease	Value. Increase	Value. Decrease
Raw Materials:				
Coal and Patent Fuel ... Tons	—	427,081	—	438,303
Coal, &c., shipped for steamers' use ... ... Tons	—	8,921	—	—
Metals:				
Brass, and manufactures of Cwts.	—	449	—	1,244
Copper, unwrought and wrought ... ... Cwts	13,021	—	18,683	—
Hardware and cutlery £	—	—	181	—
Implements and tools, and parts thereof ... £	4,907	—	—	4,108
Iron, unwrought and wrought Tons	—	914	—	55 877
Lead, pig, rolled, &c. ,,	—	—	—	10,282
Plate, and plated gilt wares £	—	—	34	—
Telegraph Wires, &c. £	—	—	16,455	—
Tin, unwrought ... Cwts	1,375	—	461	—
Zinc or Spelter ... ,,	—	5,282	—	4,241
Other Articles ... £	—	—	—	4,279
			35,794	80.011
			—	35,794
Total	—	—	—	44,217
Machinery:				
Steam engines	—	—	—	15,952
Other descriptions	—	—	169,850	—
			169 850	15,952
			15,952	—
Total	—	—	153,898	—
Alkali ... ... Cwts.	16,593	—	—	25,495
Cement ... ... Tons	—	2,437	—	4,180
Products of Coal ... £	—	—	38,796	—

EXPORTS:—BRITISH AND IRISH PRODUCE.

Principal and Other Articles	Quantities. Month ended Jan. 31. 1894.	Quantities. Month ended Jan. 31. 1895.	Values. Month ended Jan. 31. 1894.	Values. Month ended Jan. 31. 1895.
Metals and Articles Manufactured therefrom (except Machinery):—				
Brass, and Manufactures of, not being Ordnance	Cwts. 8,354	Cwts. 7,905	£ 31,231	£ 30,587
Copper: Unwrought, in Ingots, Cakes, or Slabs, and Precipitate:				
To Germany	3,883	4,417	8,967	7,737
,, Holland	8,514	7,526	10,720	15,959
,, Belgium	2,020	2,415	4 676	5,093
,, France	3,964	20,422	9,633	43,506
,, Italy	220	1,920	650	4,199
,, British East Indies ..	1,052	88	2,465	194
,, Other countries	5,423	3,739	12,342	8,506
Total	22,117	40,027	49,503	85,094
Wrought, or Manufactures unenumerated:				
To Sweden and Norway ..	386	384	1,177	1,260
,, Germany	99	127	420	483
,, Turkey	5,038	5,992	13,972	15,814
,, Egypt	3,122	1,030	8,264	2,879
,, Brazil	878	3,759	2,393	1 ,397
,, British East Indies ..	7,803	12,779	20,164	30,439
,, Australasia	437	598	1,394	1,924
,, Other countries	9,653	5,672	27,733	16,641
Total	27,416	30,405	75,547	79,837
Mixed or Yellow Metal:				
To China and Hong Kong ..	2,153	212	4 935	461
,, British East Indies ..	27,323	21,620	53,9 8	43,855
,, Other countries	4,090	3,853	10,399	8,728
Total	33,566	25,685	74,262	53,044
Total of Copper	83,099	96,120	199,312	217,975
Implements and Tools, and parts thereof	—	—	101,701	94,693
Iron and Steel: Pig-iron:	Tons.	Tons.	£	£
To Russia	585	601	1,334	1,448
,, Sweden and Norway ..	1,190	227	2,382	564
,, Denmark	498	1,188	992	2,330
,, Germany	3,3 9	1,696	9,204	3,779
,, Holland	4,000	4,920	7,707	12,2 5
,, Belgium	2,534	2,8 0	6,4 5	8,825
,, France	4,891	3,0 0	12,381	5,889
,, Portugal, Azores, and Madeira	373	1 602	842	2,845
,, Spain and Canaries ..	1,099	2,883	2,912	6,003
,, Italy	769	6,444	1,894	13,068
,, United States	1,301	761	5,953	4,099
,, Australasia	1,693	1,176	3,699	2,8 9
,, British North America ..	437	—	1,553	—
,, Other countries	3,025	8,078	8,909	18,173
Total	25,704	35,677	64,947	82,154
Bar, angle, bolt, and rod ..	13,709	10,578	87,182	64,470
Railroad of all sorts	22,487	24,283	111,369	102,822
Iron and steel wire, &c. ..	2,512	3,227	144,877	54,829
Galvanised sheets	14,713	13,852	18 ,290	147,517
Hoops, plates, boiler plates, &c.	13,880	8,312	100,346	53,962
Cast and wrought iron, &c. ..	17,679	14,086	253,724	207,099
Old, for re-manufacture ...	4,128	4,599	11,782	11,561
Steel, unwrought	14,659	10,415	137,701	107,648
Black plates for tinning ...	—	3,626	—	29,961
Manufactures of steel, or of iron and steel combined ...	637	823	23,036	31,716
Total of iron and steel (including tin plates)	161,804	166,7 1	1,406,963	1,391,.86
Tin Plates and Sheets:				
To Russia	5,156	1,927	21,454	19,615
,, Germany	361	380	4,560	4,836
,, Holland	283	352	4,024	4,678
,, France	848	1,175	10,639	13,283
,, Portugal, Azores, and Madeira	263	251	3,180	3,108
,, Italy	473	426	6,055	5,082
,, Roumania	—	—	—	—
,, United States	18,296	18,526	226,501	216,168
,, Brazil	208	567	2,623	6,390
,, Argentine Republic ..	345	181	3,785	2,150
,, British East Indies ..	617	962	8,164	11,592
,, Australasia	814	690	10,203	8,164
,, British North America ..	1,386	927	18,139	10,389
,, Other Countries	2,646	2,478	35,845	41,393
Total	31,696	29,512	395,179	347,047
Lead: Pig Sheet, Piping, and Manufactures;	Tons.	Tons.	£	£
To Russia	189	93	1,868	912
,, Germany	151	188	1,776	1,845
,, China and Hong Kong ..	816	3 4	7,964	3,013
,, Japan	307	343	4,392	3,326
,, United States	102	262	977	2,815
,, British East Indies ..	907	812	13,862	12,168
,, Australasia	68	61	722	673
,, British North America ..	21	36	240	389
,, Other countries	896	601	9,656	6,871
Total	3,441	2,527	41,456	31,194

BRITISH AND IRISH PRODUCE—*Continued.*

Principal and Other Articles	Quantities. Month ended Jan. 31. 1894.	Quantities. Month ended Jan. 31. 1895.	Values. Month ended Jan. 31. 1894.	Values. Month ended Jan. 31. 1895.
Plate & Plated & Gilt Wares	—	—	19,338	19,372
Telegraphic Wires, & apparatus connected therewith ..	—	—	18,738	35,193
Tin, Unwrought:	Cwts.	Cwts.	£	£
To Russia	1,836	1,746	7,353	5,992
,, Sweden and Norway ...	351	529	1,401	1,707
,, Germany	1 0	651	743	2,097
,, France	1,274	1,919	5,097	6,325
,, Turkey	1,515	1,177	6,110	3,920
,, United States	6	100	25	334
,, British North America ...	433	875	1,760	2,856
,, Other countries	3,198	3,680	12,733	12,742
Total	8,803	10,678	35,212	35,673
Zinc or Spelter: Unwrought and Wrought	19,489	14,207	13,536	9,295
Total of Principal Articles ...	—	—	2,017,523	1,977,585
,, other Articles	—	—	60,292	56,013
Total of Metals and Articles Manufactured therefrom (except Machinery)	—	—	2,077,815	2,033,598
Alkali	483,812	500,505	145,863	110,368
	Tons.	Tons.		
Cement	27,030	24,593	44,110	39,630
Products of coal (including paraffin, petroleum, &c.) ..	—	—	106,107	144,903

MACHINERY.

Mining: (Not Steam Engines.)	—	—	£ 3,668	£ 1,591
To Countries in Europe ..	—	—	—	—
,, United States	—	—	2,480	2,654
,, Countries in South America	—	—	14,720	30,007
,, British Possessions in S. Africa	—	—	2,241	2,715
,, ,, East Indies	—	—	1,0 0	3,311
,, Australasia	—	—	3,009	3,314
,, Other Countries ...	—	—	—	—
Total	—	—	28,118	44,092
Total of Machinery other than Steam Engines	—	—	771,291	941,141
Total of Steam Engines .	—	—	196,128	180,276
Total of Machinery and Mill Work	—	—	967,519	1,121,417

EXPORTS OF FOREIGN AND COLONIAL MERCHANDISE.

Principal Articles.	Quantities. Month ended Jan. 31. 1894.	Quantities. Month ended Jan. 31. 1895.	Values. Month ended Jan. 31. 1894.	Values. Month ended Jan. 31. 1895.
Copper:	Tons.	Tons.	£	£
Unwrought and part wrought	693	845	31,863	37,466
Iron and Steel:				
Bar, angle, bolt, and rod ..	1,339	1,875	13,406	15,2 2
Steel, unwrought	776	693	5,951	5,597
Manufactures:				
Girders, beams, and pillars ...	58	7	341	38
	Cwts.	Cwts.		
Unenumerated	86,171	44,209	45,756	30,781
	Gals.	Gals.		
Petroleum	226,337	111,(00	6,897	4,124
	Lbs.	Lbs.		
Quicksilver	220,533	181,810	17,837	15,5 0
	Cwts.	Cwts.		
Saltpetre	6,828	1,334	5,746	1,144
Tin, in blocks, ingots, bars, or slabs	24,829	16,677	94,129	51,218

IMPORTS.

SUMMARY OF INCREASES AND DECREASES.

Principal and Other Articles.	Quantities. Increase.	Quantities. Decrease.	Value. Increase.	Value. Decrease.
Metals:			£	£
Copper: Ore ... Tons	1,114	—	49,307	—
Regulus ... ,,	1,124	—	4,974	—
Unwrought and part wrought	—	458	—	29,110
Iron: Ore ... ... ,,	—	54,083	—	51,256
Bar ... ... ,,	477	—	5,324	—
Steel, unwrought ...	—	911	—	8,638
Lead: Pig and sheet .. ,,	—	2,608	—	25,594
Pyrites of iron or copper ,,	—	11,780	—	20,551
Quicksilver ... Lbs.	31,200	—	2,758	—
Silver Ore	—	—	—	43,842
Tin, in blocks, &c. ... Cwts.	—	1,185	—	49,387
Zinc, crude ... ... Tons	1,793	—	15,063	—
Other Articles	—	—	28,281	—
			135,687	228,358
			—	105,587
Total	—	—	—	122,771
Chemicals:				
Alkali ... ... Cwts.	8,634	—	4,753	—
Brimstone ... ... ,,	—	25,825	—	5,994
Saltpetre ... ... ,,	9,309	—	8,367	—
Iron Manufactures:				
Beams, girders, &c. ... Tons	1,274	—	6,606	—
Unenumerated ... Cwts	—	53,181	—	18,074
Zinc Manufactures ... ,,	6,183	—	5,466	—

FOREIGN AND COLONIAL PRODUCE.

Principal and Other Articles.	Quantities. Month ended Jan. 31. 1894.	Quantities. Month ended Jan. 31. 1895.	Values. Month ended Jan. 31. 1894.	Values. Month ended Jan. 31. 1895.
Copper:	Tons.	Tons.	£	£
Ore:—From Spain	2,541	10	5,024	100
,, Italy	544	1,163	2,2 0	5,800
,, United States ..	196	52	2 470	962
,, Venezuela ...	943	1,200	2,829	18,0 0
,, Chili	1,254	57	8,869	965
,, Cape	—	4,614	—	45,393
,, British N. America	—	—	—	—
,, Other countries ...	896	492	7,783	7,162
Total	6,474	7,588	29,175	78,382
Regulus and Precipitate:				
From Portugal	900	—	27,000	—
,, Spain	2,913	3,144	78,047	74,832
,, United States ..	1,282	2,950	37,155	70,074
,, Chili	48	40	1,453	1,000
,, Other countries ...	1,314	1,447	11,857	19,780
Total	6,457	7,581	160,512	165,486
Unwrought and part Wrought:				
From United States ..	3,449	2,676	149,719	114,881
,, Chili	1,384	1,440	59,486	57,728
,, Australasia	498	495	22,280	21,2 4
,, Other countries ...	432	694	20,448	28,960
Total	5,763	5,305	251,933	222,823
Iron and Steel:				
Iron ore { From Spain ...	3 4,026	259,603	207,731	166,399
Iron ore { Other countries .	29,086	29,426	33,046	23,122
Total	343,112	289,029	240,777	189,521
Iron, bar, angle, bolt, & rod .	2,683	3,160	21,096	26,420
Steel, unwrought	1,613	704	17,311	8,673
Lead, pig and sheet	15,927	13,321	152,272	126,678
Pyrites of iron or copper or sulphur	61,526 Lbs.	49,736 Lbs.	104,313	23,782
Quicksilver	13,600	45,(00	1,092	3,850
Silver Ore	—	—	275,203	231,3 1
Tin, in blocks, ingots, bars, or slabs:	Cwts.	Cwts.		
From Straits Settlements ...	60,522	55,743	227,062	178,597
,, Australasia	13,843	11,830	52,488	37,101
,, Other countries ...	3,698	9,308	13,453	27,924
Total	78,063	76,878	293,009	243,622
Zinc, crude in cakes ... Tons	3,908	4,701	54,109	69,172
Total of principal articles ...	—	—	1,600,802	1,449,770
,, other articles	—	—	126,168	154,429
Total of metals	—	—	1,726,970	1,604,199

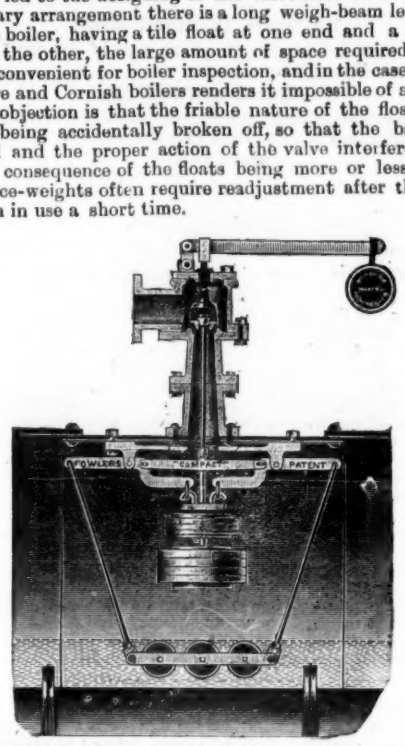
MECHANICAL ENGINEERING:

MACHINERY, MINING and RAILWAY PLANT, &c.

Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

THE "COMPACT" HIGH STEAM AND LOW WATER SAFETY VALVE.

A SAFETY VALVE that will give due warning of shortness of water, and reduce the steam pressure to prevent explosions, has long been considered a necessity for properly-equipped boilers, but several rather serious objections to the type of valve which has hitherto been generally adopted for this purpose have led to the designing of the valve here described. In the ordinary arrangement there is a long weigh-beam lever fixed inside the boiler, having a tile float at one end and a balance-weight at the other, the large amount of space required making it very inconvenient for boiler inspection, and in the case of short Lancashire and Cornish boilers renders it impossible of adoption. Another objection is that the friable nature of the float results in pieces being accidentally broken off, so that the balance is destroyed and the proper action of the valve interfered with; whilst, in consequence of the floats being more or less porous, the balance-weights often require readjustment after the valves have been in use a short time.

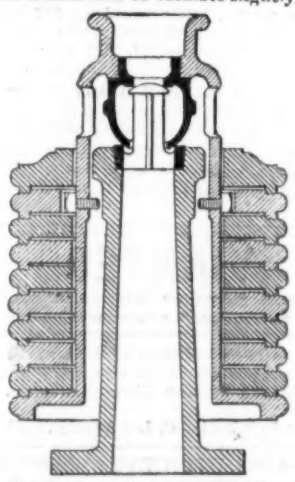


These difficulties Messrs. Meldrum Bros., of Manchester, claim to be overcome in the design shown. Instead of a long single beam occupying some three bells of plating, there is a duplex arrangement of levers, and the balance-weight is suspended centrally above the float, which latter is composed of several cylinders suspended from two stirrups. These cylinders are filled with water, and require only a balance equal to their immersed weight, the contained water causing the valve to lift when the surrounding water leaves the float. This construction of floats permits of the whole apparatus being exactly balanced before leaving the makers' works, and ensures the future working of the valve at the constant pressure for which it is set.

The duplex arrangement of levers allows of the whole apparatus coming within a length of three feet, and thus permits of the valve being applied to any boiler where there is so much space at disposal, whilst the short leverages permit of rapid action on the part of the low-water valve. The cover is so arranged as to be easily removed for inspection of the valve.

THE "COMPACT" DEADWEIGHT SAFETY VALVE.

This is another speciality of the same firm. It will be seen from the illustration that this valve consists of a hollow spherical casing resting on two seats, one face of the valve as well as one face of the fixed seating forming portions of concentric spheres, so that the valve is thus free to oscillate slightly on its seat, just



like an ordinary Cowburn, while its construction is such that the dead load required is only necessary to weight the annulus represented by the two valve diameters, by which arrangement the total weight of the valve is reduced by about one-half, while all the pieces are of such dimensions that the valve can be easily fitted by one man.

BRITISH GUIANA'S GOLD INDUSTRY.—The following are the returns of gold entered at the office of the Department of Mines, Georgetown, for the weeks ending:—

	Jan. 5th. ozs. dwts. grs.	Jan. 12th. ozs. dwts. grs.	Jan 19th. oz. dwts. grs.
Barama	7 14 6	102 3 17	3 15 4
Barima	35 7 0	336 1 2	132 7 6
Cuyuni.....	7 8 23	104 8 19	417 17 3
Essequebo	465 18 22	3 1 12	—
Groete Creek ...	1 15 5	—	—
Mazaruni	125 13 13	—	—
Potaro	450 11 0	5 18 9	5 9 5
Puruni.....	—	—	8 10 5
	1,094 8 21	551 13 11	567 18 23

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.E.

(*Cabled Weekly*).

Knight's Mine.

Good sound development work is being carried on at this mine, and the pannings show fully 11 dwts. free gold to the ton.

Wemmer Mine.

This is one of the exceptional cases on the Rand where the ore was worth on the surface 1 ounce, and at the junction of the free and pyritical zone only worth 10 dwts., and now at the 7th level the assays show that nearly 18 dwts. can be kept up for some time, but as this is very irregular for a banket reef, the ore may again become poor, but as things are going at present the mine looks wonderfully well.

Leeuwpoort Mine.

The pannings only show a few pennyweights. Mine very low grade.

De Beers Diamond Mine.

A rise is predicted in these shares by some of the most knowing speculators in Kimberley.

Kleinfontein Mine.

Active development work is being carried on at the western shaft, and the reef assays 27 dwts. from 18 inches of reef.

East Rands.

The eastern drive on the reef in the Comet has shown great improvement.

Ginsberg Mine.

Exceptional good assays are being obtained from the lower levels.

Driekopjes Diamond Mine Co. (Welgegund).

This property is situated about 10 miles from Winburg Road Station, Orange Free State, and forms part of the property belonging to the Driekopjes Diamond Company, although quite 60 miles away from the farm from which the company derives its name, and which was first worked. I have thoroughly inspected the mine, which consists, so far as at present ascertained, of about 95 claims, 31 feet by 31 feet. New machinery has been specially designed and manufactured by Messrs. Davey, Paxman and Co., and when at Winburg Station I saw the cases containing the last consignments, and within the next four weeks it should be in full swing. Besides this mine the company has several other farms, but at present all work is concentrated on Welgegund, and I fully believe that this mine alone will prove of enormous value, and should nothing further be discovered the profits made will provide good dividends. The stone obtained in the preliminary washing proved to be of excellent quality, and I think it should be worth 30s. per carat. Two-and-a-half miles of piping is laid down to bring water, of which there is a never-failing supply, to the mine, and the pumping, hauling, and washing plant required are already erected, and the balance of the machinery which has arrived at the station will complete a remarkably well-designed plant.

MASSACRE BY GOLD PROSPECTORS. — A despatch from Perth (Western Australia) to the *Melbourne Age* states that intense excitement has been caused at Coolgardie by the arrest of seven gold prospectors, who had just returned from the interior, on charges of manslaughter and murder. These men penetrated to a distance of 100 miles beyond Coolgardie, and according to their own accounts, which there is no reason to doubt, they discovered an outcropping cone of quartz 70 feet high, 250 yards long, and 20 feet wide at the summit. The whole of this great mass of quartz was found to be permeated with gold of marvellous richness. The seven prospectors having carefully determined the exact geographical position of their extraordinary find, made an experimental trenching at the base of the cone, and were rewarded by getting richgold. Then they made tracks for Coolgardie, and on arrival there applied for leases of the land upon which the cone is situated, in accordance with the colonial gold laws. Meanwhile, sinister rumours had gained currency in the Coolgardie district. The seven prospectors had admittedly had trouble with the natives, in which blood had been shed. Finally it was charged against them that they had deliberately massacred an entire tribe of blacks, including woman and and children. The police managed to get sufficient evidence to justify them in acting, and the party were arrested on the charges mentioned. The men do not deny that they killed many natives, but they claim that they acted purely in self-defence. The blacks, they declare, attacked and plundered their camp, and if they had not used their arms they would have lost their own lives.

GYMPIE'S GOLD RETURNS FOR 1894.—The following are the returns in round numbers for December, 1894:—Crushings, 8578 tons; yields, 10,886 ounces; per ton, 1 ounce 5 dwts. 9 grains; dividends, £19,550; showing the following increases as compared with the corresponding month, 1893: Crushings, 567 tons; yields, 2143 ounces; per ton, 13 dwts.; dividends, £3600. The totals for the twelve months ending December 31, 1894, are:—Crushings, 85,002 tons; yields, 111,507 ounces; dividends, £229,023.

BISSENBERGER GOLD MINING COMPANY (LIMITED).—The share certificates of this company are now ready for delivery in exchange for bankers' receipts, and can be obtained at 54, Old Broad-street.

ROBINSON GOLD MINING COMPANY (LIMITED). — A London agency and transfer office has been opened at 8, Prince's-street, E.C., and Messrs. John H. Butt and Simon Marcus have been appointed London agents.

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C. W. LEE, Oaklands, Dewsbury.

YOUNG MINING ENGINEER (Assoc.M.Inst.C.E. and A.Inst.M.M.) desires an APPOINTMENT abroad as ASSISTANT MANAGER or ENGINEER. Six years' practical experience. Holds good Certificates in Mining, Ore Dressing, Geology, Mineralogy, Metallurgy, Assaying, &c. Good testimonials or references.

Address, "ENGINEER," MINING JOURNAL Office, 18, Finch Lane, London, E.C.

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Full details as to experience, and salary expected, to be sent to "Z.A.," care of R. A. KNIGHT AND CO., 12, Abchurch Lane, E.C.

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IN VOLUNTARY LIQUIDATION.

In the Matter of the Companies Acts 1862 to 1890,

and in the matter of

The Phœnix and West Phœnix United Mines.

TO BE SOLD by PUBLIC AUCTION, under the direction of the Liquidators of the above named Company, at WEBB'S HOTEL, LISKEARD, CORNWALL, on THURSDAY, the 28th day of FEBRUARY, inst., at TWO o'clock in the afternoon precisely, subject to such conditions as shall be then and there produced, all those extensive, valuable, and productive mineral properties, known as the

PHŒNIX AND WEST PHŒNIX UNITED MINES,

in the Parish of Linkinhorne, near Liskeard, Cornwall, together with the Company's interest in the Mining Leases or Setts under which operations are being carried on, and including the Mining Plant, Machinery, and Materials, Halvans, and Slimes thereon, comprising:—

One 60 inch Pumping Engine with four Boilers.
One 36 inch Pumping Engine and Boiler.
One Double Cylinder Stamping Engine and three Boilers, capable of driving 96 heads of stamps.
One 32 inch Stamping Engine, three Boilers, and 64 Heads of Stamps.
Two 28 inch Winding Engines and two Boilers.
One 22 inch Winding Engine and Boiler.
One Air Compressor Engine and Receiver for Boring Machinery and 500 fathoms of Air Pipes.
One 15 inch Engine and Boiler.
One 19 inch Engine and Cage Shaft Crusher.
One 20 inch Pulveriser Engine, Boiler, and three Pulverisers.
Parts of a new Winding Engine for the new shafts.
One 60 feet Water Wheel for pumping water, with 300 fathoms of 2¼ inch rods, and 40 fathoms of 15 inch pumps.
212 fathoms of 12 inch Pumps, Poles, Rods, and 43 fathoms of 6 inch Pumps, with Plungers, &c.
250 fathoms of Flat Rods, and all the necessary plant, machinery, and appliances for treating about 900 tons of tin stuff per week.
Many thousands of tons of Halvans and Slimes, containing quantities of Tin and Copper.
The appointments of Offices, Blacksmiths', Carpenters', and Fitting Shops, and Stables,

The other numerous and valuable effects will be contained in a printed inventory that will be produced at the Sale.

There are also at Withybrook Mine

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The Mines contain one of the largest lodes known in the County of Cornwall, and have produced Copper and Tin Ores amounting to over £1,300,000 in value, which have been only partially worked to a perpendicular depth of about 160 fathoms from surface.

They are situated about seven miles from Liskeard, and are connected with the Port of Looe by the Liskeard and Caradon Railway.

Catalogues with full particulars will be forwarded on request, and applications to inspect, and for Catalogues and other particulars, may be addressed to the undersigned, at the Office, Windsor View, Barn Street, Liskeard.

WM. POLKINGHORNE,
R. H. WILLIAMS,
CHAS. WM. CLINTON,
} Liquidators.

Dated this 11th February, 1895.

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LA PLATA MINES (LIMITED).

ANY SHAREHOLDER who may not have received the IMPORTANT CIRCULARS issued this day should communicate at once with the SECRETARY of the Company.

No. 11, Poultry, E.C.,
February 11, 1895.

THE NEW CHILE GOLD MINING COMPANY (LIMITED) STAMP 10s.

In the High Court of Justice, Chancery Division,
MR. JUSTICE STIRLING,
In the matter of the Companies Acts 1862 to 1867,
AND IN THE MATTER OF
The New Chile Gold Mining Company (Limited)

BY direction of the Judge, notice is hereby given that George Sneath, the Official Liquidator of the above-named Company, made application by Summons returnable at the Chambers of the said Judge on the 16th January, 1895, for an ORDER to DISSOLVE the above-named Company, and for consequential directions, and that notice by advertisement was on the 12th day of December, 1894, given that any Shareholder or Contributory claiming any rights to be recouped out of any of the remaining assets of the Company or any rights in respect of the Capital of the Company which has not been called up and remains unpaid in respect of the Shares of the Company issued at a discount might appear either in person or by their Solicitors before the Chief Clerk of the said Judge on the said 16th January, 1895, in support of any such claim, and to show cause why an Order for the dissolution of the Company should not be made; and whereas upon the hearing of the said Summons several persons, Contributories of the Company, appeared, but no person so appearing made, or urged, any such claim or right to be recouped or otherwise as aforesaid; and it appearing that the assets of the Company exclusive of any uncalled Capital as aforesaid are more than sufficient for payment of the debts of the Company and the costs of the Liquidation, the said Judge has further directed that the further hearing of the said Summons stand adjourned until Thursday, the 28th February, 1895, at Two o'clock in the afternoon, and that any Shareholder or Contributory claiming any such rights as aforesaid in respect of the Capital not called upon the Shares of the Company issued at a discount, is to be at liberty to appear at that time before the Chief Clerk either in person or by his Solicitors, and to make such application in the premises as he or they may be advised in respect of any right of the fully-paid Shareholders to apply that the uncalled Capital as aforesaid be called and paid up and distributed amongst the Shareholders so as to adjust and equalise the rights of all classes of the Shareholders between themselves.

Appearances are to be entered prior to the 28th February in the book kept for that purpose in the Chambers of the said Judge.

Dated this 2nd day of February, 1895.

H. F. CHURCH, Chief Clerk.

SHIPPING.

UNION LINE.

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†§Gaul (tw. screw)	——	Feb. 19	Feb. 16	Feb. 23
††Tartar	——	——	——	Mar. 2
Trojan...	Feb. 24	——	Mar. 2	Mar. 9
†Scot (tw. screw)	——	——	——	Mar. 16

† Calling at Madeira. ‡ Via Lisbon and Tenerife. § To East Africa.

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Cheap Tickets are issued for Passengers' Friends.

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Dunottar Castle (via Madeira)	Feb. 22	Feb. 23
†Harlech Castle (via Canaries)	Mar. 1	Mar. 2
Hawarden Castle (via Madeira) ...	Mar. 8	Mar. 9
Doune Castle (via Canaries)	Mar. 15	Mar. 16

† For Madagascar and Mauritius.

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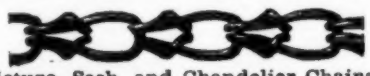

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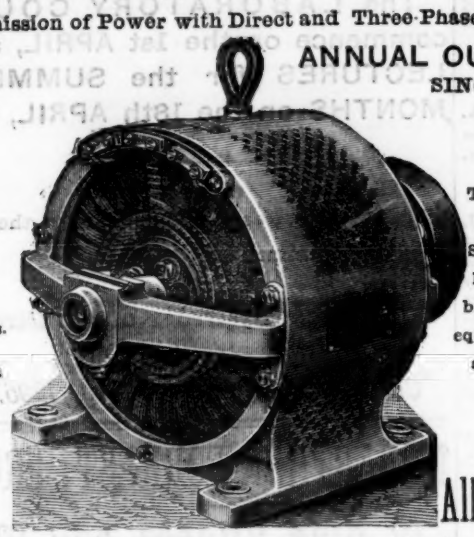

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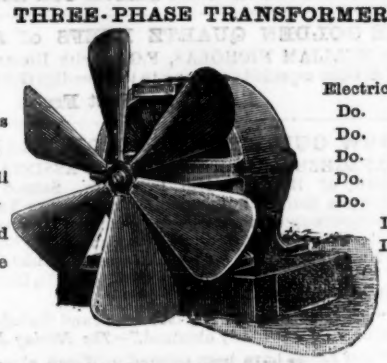

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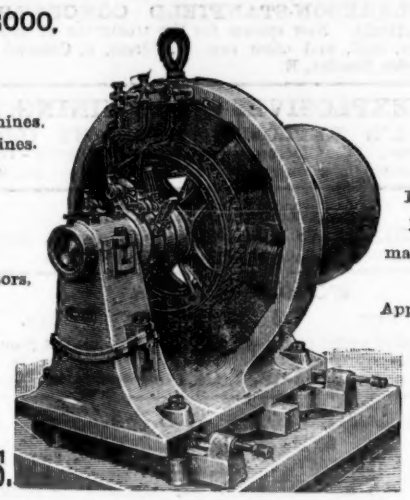

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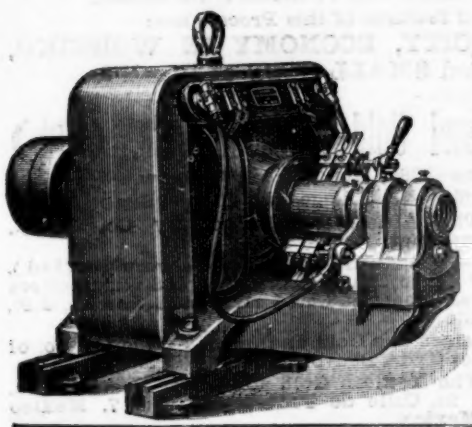

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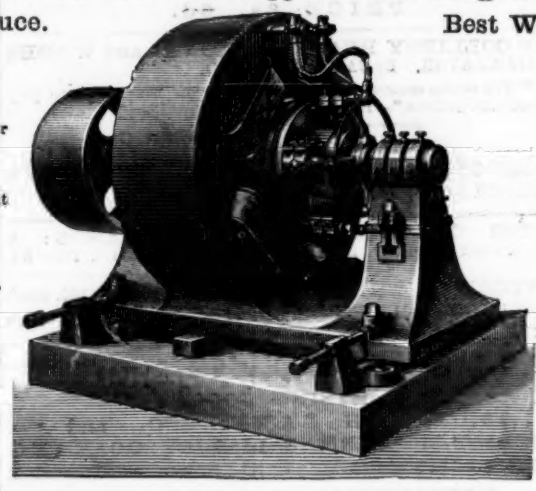

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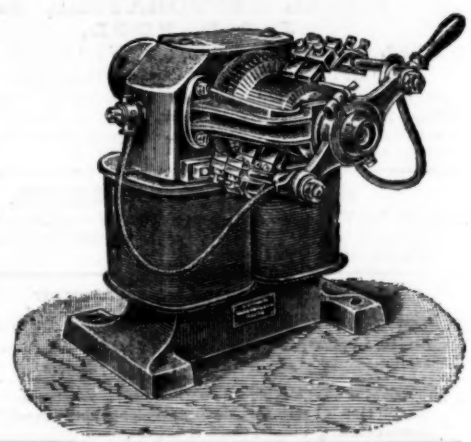

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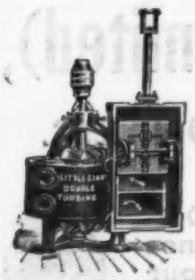

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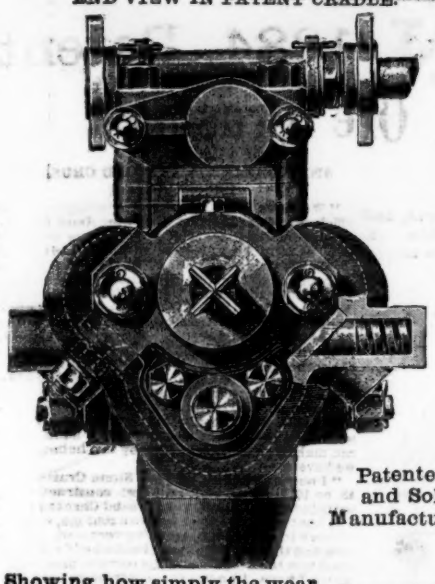

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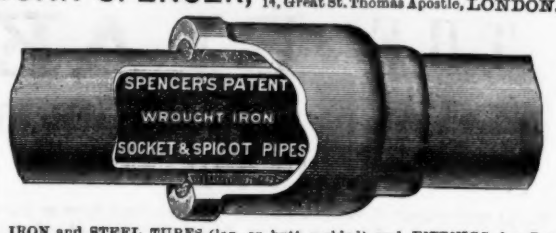

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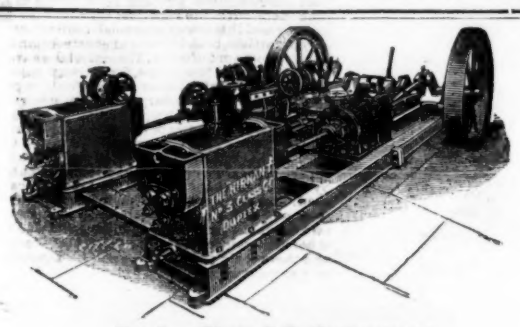

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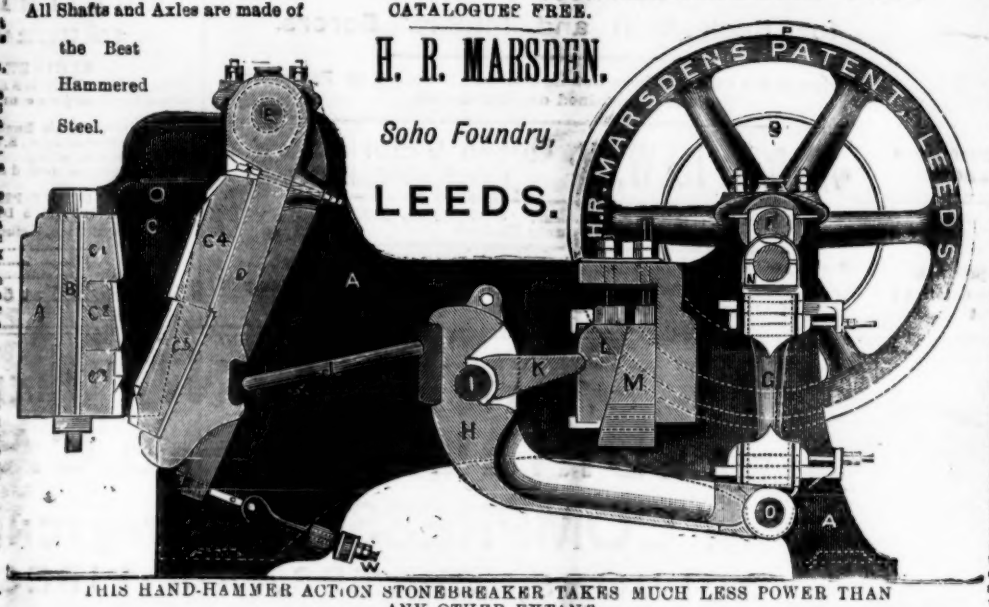

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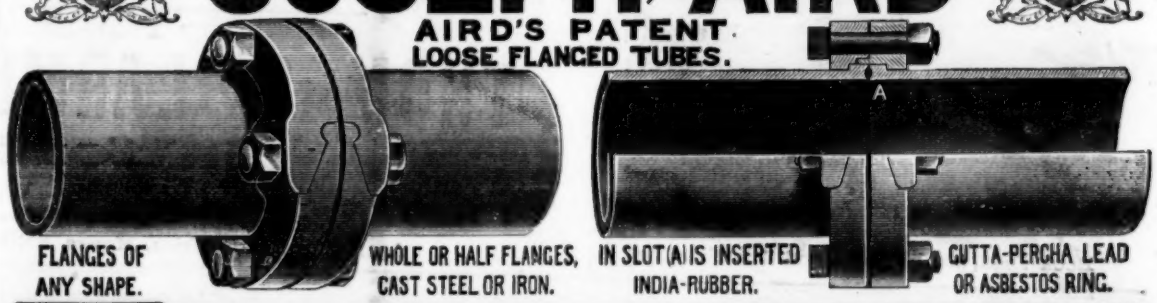

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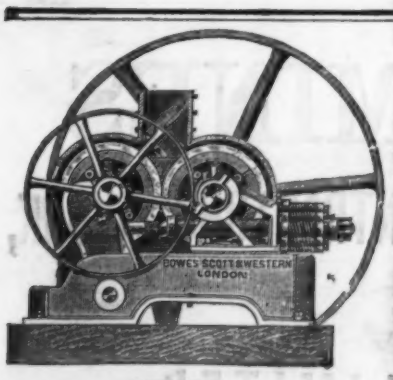

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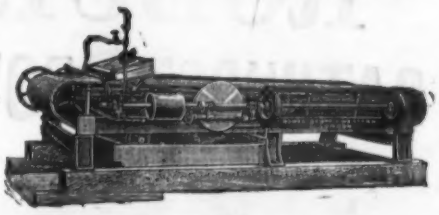

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